DOCTOR OF CLINICAL PSYCHOLOGY (DCLINPSY)

Doctorate in Clinical Psychology: Main Research Portfolio

1) The Psychological Treatment of Post-Traumatic Stress Disorder in People with Psychosis; 2) Supporting the supporters: Evaluation of a consultation service for children in care; 3) The psychological impact of social support following a traumatic event.

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Main Research Project…….6806 words

Executive Summary……..958 words

Connecting Narrative……..1997 words

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Abstracts

Main Research Project

Children may use social support to manage symptoms of post-traumatic stress disorder (PTSD). Good *perceived* social support is associated with fewer PTSD symptoms. Limited research exists about *actual* support children receive post-trauma and whether this is associated with PTSD. This study explored *actual* and *perceived* support, factors that influence *actual* and *perceived* support and the relationship between social support and PTSD 4-weeks and 3-months post-trauma. Eighty-nine children and their parents completed measures of PTSD and social support 4-weeks after attending the emergency department following a single-incident trauma. Seventy children completed PTSD measures 3-months post-trauma. Children had good levels of *perceived* social support which was associated with lower perceived barriers to support, after controlling for gender. *Perceived* social support at 4-weeks predicted PTSD cross-sectionally, after controlling for age, but did not predict change in PTSD at 3-months. Eighty-percent of children felt they needed support post-trauma, seeking it from parents or friends. *Actual* support did not predict PTSD cross-sectionally or longitudinally. These findings support previous research that *perceived* social support is protective post-trauma. More information is needed about what support children want post-trauma and whether they receive this. These findings will help inform interventions to promote *perceived* social support post-trauma.

Service Improvement Project

Children in care are at increased risk of developing mental health problems potentially due to the increased experience and impact of social and environmental risk factors in their early life. However, there are difficulties accessing mental health services that understand their specific needs. Mental health consultations have been recommended to increase access to mental health services for those working with children in care. A child and adolescent mental health service has been providing a consultation service to social workers for over 4 years. **Clare Dixon** reports the results of an audit of 83 consultations and a survey completed by 34 social workers, to gather their views about the consultations. The results showed that consultations were utilised by several social work teams, were requested for a variety of reasons and resulted in a range of outcomes. The social workers were positive about their experiences of the consultations and reported that it gave them a better understanding of the difficulties they were experiencing and how to manage them. The results highlighted difficulties with the internal administration processes, practicalities

and social workers' understanding of what the consultations provide. Recommendations were provided highlighting areas of good practice and ways to improve the consultations that are provided to the social workers for children in care.

Critical Review of the Literature

The prevalence of post-traumatic stress disorder (PTSD) in people with psychosis is high. Intervention guidelines for psychosis recommended that if PTSD is diagnosed then intervention guidelines for PTSD should be followed. However, studies evaluating PTSD interventions often exclude people with psychosis. Eighteen studies were included in this review which aimed to evaluate the evidence for the effectiveness of PTSD interventions for people with psychosis and see if there was any additional impact on symptoms of psychosis. Interventions included trauma-focused cognitive therapies, EMDR, prolonged exposure, video testimony and written emotional disclosure to treat single and multiple traumas. The findings suggest PTSD interventions have some positive effects for people with psychosis but there are considerable methodological limitations which bias the results and limit the conclusions that can be drawn. The findings also provide some tentative evidence that the interventions have a positive impact on comorbid symptoms of psychosis but there are several limitations to consider. More work is needed adopting stronger methodologies with better controls and looking at symptoms of psychosis as a specific outcome of the intervention. This review concludes that evidence in this area is still in its infancy thus limited conclusions can be drawn about the effectiveness of PTSD interventions for people with psychosis.

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Critical Review of the Literature:

The Psychological Treatment of Post-Traumatic Stress Disorder in People with Psychosis

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Abstract

The prevalence of post-traumatic stress disorder (PTSD) in people with psychosis is high. Intervention guidelines for psychosis recommended that if PTSD is diagnosed then intervention guidelines for PTSD should be followed. However, studies evaluating PTSD interventions often exclude people with psychosis. Eighteen studies were included in this review which aimed to evaluate the evidence for the effectiveness of PTSD interventions for people with psychosis and see if there was any additional impact on symptoms of psychosis. Interventions included trauma-focused cognitive therapies, EMDR, prolonged exposure, video testimony and written emotional disclosure to treat single and multiple traumas. The findings suggest PTSD interventions have some positive effects for people with psychosis but there are considerable methodological limitations which bias the results and limit the conclusions that can be drawn. The findings also provide some tentative evidence that the interventions have a positive impact on comorbid symptoms of psychosis but there are several limitations to consider. More work is needed adopting stronger methodologies with better controls and looking at symptoms of psychosis as a specific outcome of the intervention. This review concludes that evidence in this area is still in its infancy thus limited conclusions can be drawn about the effectiveness of PTSD interventions for people with psychosis.

Keywords: Psychosis, PTSD, Trauma, Intervention, Psychological Therapy

Introduction

Traumatic experiences across the lifespan are a key factor in the aetiology of psychosis. Kilcommons and Morrison (2005) found that 94% of people studied had experienced at least one traumatic event in their lifetime with patients with psychosis experiencing on average 3.6 traumatic events.

PTSD is a psychological disorder that can develop following the experiencing or witnessing of an event that involves actual or threatened death or serious injury to self or others. The disorder is characterised by the following symptoms: re-experiencing; cognitive and behavioural avoidance; negative alterations in cognitions and mood; hyperarousal; and a significant impact on daily functioning (APA, 2013). Complex PTSD, sometimes known as Disorders of Extreme Stress Not Otherwise Specified (DESNOS: Luxenberg, Spinazzola, & Van der Kolk, 2001) is not recognised in Diagnostic and Statistical Manual of Mental Disorders – Version 5 however, researchers have argued that following prolonged or multiple traumatic events (e.g. domestic abuse) individuals may develop additional symptoms to PTSD for which an adapted treatment approach has been suggested (Cloitre, Koenen, Cohen, & Han, 2002). These additional symptoms include difficulties in regulating emotion and behaviour; impaired attention and consciousness (e.g. significant dissociation); increased negative self-perception; significant impairment in relations with others; somatisation (e.g. digestive problems, chronic pain); and, alterations in systems of meaning.

The prevalence of PTSD in people with psychosis is estimated at 11-52% (Achim et al., 2011; Buckley, Miller, Lehrer, & Castle, 2008; Cascardi, Mueser, DeGiralomo, & Murrin, 1996; Lu et al., 2011; McGorry, 1991; Meyer, Taiminen, Vuori, Äijälä, & Helenius, 1999; Mueser et al., 1998; Mueser et al., 2001; Shaw, McFarlane, Bookless, & Air, 2002). This is considerably higher than the estimated point prevalence of 2% (Stein, Walker, Hazen, & Forde, 1997) and lifetime prevalence of 7-12% in the general population (Breslau, Davis, Andreski, & Peterson, 1991; Breslau, Peterson, Poisson, Schultz, & Lucia, 2004; Kessler, Chiu, Demler, Merikangas, & Walters, 2005; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993).

A meta-analysis found that those who experienced a trauma or adversity in childhood were 2.8 times more likely to develop psychosis (Varese et al., 2012). The evidence clearly points to a strong link between the experience of a traumatic event and a diagnosis of

psychosis and research is now starting to examine the potential mechanisms that may help to explain this.

Morrison, Frame and Larkin (2003) have considered three different ways in which trauma and psychosis may be linked. Firstly, they have discussed that the experience of psychosis and the experiences associated with an acute episode (e.g. hospitalisation) can be construed as a traumatic experience in which people may go on to develop PTSD. Secondly, they suggest experiencing a trauma can increase an individual's vulnerability and risk for developing psychosis. Thirdly, they suggest that trauma and psychosis are related concepts and that there is a considerable degree of overlap between the symptoms that characterise each disorder. For the latter two ideas, research has started to explore the potential mechanisms.

Using a cognitive approach to positive symptoms of psychosis, Morrison (2001) suggested that individuals may develop negative beliefs about the self, world and others in response to a traumatic experience. These beliefs are then often used to interpret everyday ambiguous events e.g. the world is unsafe. This process has been identified in both PTSD and psychosis. The diagnoses are often distinguished as there appears to be a clearer link between the traumatic event and the content of the belief in PTSD than in psychosis.

A similar mechanism that has been explored is information processing. Steel, Fowler and Holmes (2005) identified a common deficit in both disorders in an individual's ability to integrate sensory information occurring in the present with their past experiences of similar contexts. For example, when an individual is experiencing a flashback they are unable to link that experience in the present with similar events that have occurred in the past. They argued that the ability to integrate information is reduced at times of stress and if someone experiences ongoing or multiple stressful experiences they become less effective at integrating information over time. They found that those who score as high positive schizotypes or are in the acute phase of psychosis demonstrate similar deficits in information processing as those who are experiencing PTSD. This evidence suggests there is a common underlying process but could also suggest that those with a deficit in information processing (i.e. high positive schizotypes) may be more vulnerable to traumatic experiences or experiences perceived as traumatic.

More recently, Bentall, Wickham, Shevlin and Varese (2012) conducted a meta-analysis which provides evidence for a symptom-specificity approach, whereby they identified a dose-response relationship that certain traumatic experiences are associated with a higher risk of developing specific symptoms of psychosis. They found that childhood sexual abuse was most strongly associated with hallucinations and childhood physical abuse, childhood neglect, victimisation and institutional care were associated with paranoia. These results are consistent with Kilcommons and Morrison (2005) who found that lifetime physical assault was strongly associated with positive symptoms and lifetime sexual assault was strongly associated with hallucinations. With respect to hallucinations, Bentall et al., (2014) hypothesised that these could be linked by deficits in source of self-monitoring whereby there is a deficit in the cognitive processes which enable someone to discriminate between internal and external sources of information. They suggest that source monitoring deficits could develop as a result of poor early attachment relationships or dissociation at the time of trauma. Campbell and Morrison (2007) also argued that dissociation at the time of the trauma may undermine a person's grounding in the outer work and reduce their ability to reality test, thus impacting on their ability to appraise of correctly attribute ambiguous or anomalous experiences. Kilcommons and Morrison (2005) also found that depersonalisation at the time of trauma was associated with the experience of hallucinations. For persecutory or paranoid delusions an abnormal attributional style has been suggested as a mechanism, whereby someone may excessively attribute negative events to external causes. Attachment has also been identified as a mechanism as disruption to early attachment will impact on the developing self-concept and the ability to trust others. Insecure attachment is not a specific risk factor to psychosis but it has been found to mediate the relationship between trust and paranoia. Social defeat can also result from poor attachment style and can lead to negative self-schemas and has also been found to mediate the relationship between trauma and psychosis (Nierop et al., 2014). Bentall et al., (2014) have presented a number of possible mechanisms and suggest that rather than there being specific mechanisms, it could be an interaction between the factors or an additive effect.

Finally, Read, Perry, Moskowitz and Connolly (2001) propose a traumagenic neurodevelopmental model which integrates biological, psychological and social factors and thinks about the impact of traumatic experiences in childhood on neurodevelopmental reactions and responses to stress.

The NICE guidelines (2014) for psychosis and schizophrenia recommend that treatment should consist of antipsychotic medication, a minimum of 16-sessions of individual cognitive behavioural therapy (CBT) and a minimum of 10-sessions over 3-12 months of family interventions. These guidelines have recognised these advances in the literature and say that PTSD should be assessed routinely in people who present with psychosis and if PTSD is diagnosed then the treatment recommendations for PTSD should be followed. For PTSD, the NICE guidelines (2005) recommend 8-12 sessions of trauma-focused CBT (TF-CBT) or Eye Movement Desensitisation Reprocessing (EMDR) for single event traumas and extending this if the individual has experienced multiple traumas, traumatic bereavement, is experiencing chronic disability as a result of the trauma or if there is significant comorbidity with other psychological disorders. However, a frequent exclusion criteria of treatment trials for PTSD is positive symptoms of psychosis (e.g. hallucinations, delusions) (Spinazzola, Blaustein, & van der Kolk, 2005) so, although this is the recommended treatment, it is unknown whether or not this approach is actually effective for people who have a diagnosis of psychosis and whether it has any implications for symptoms of psychosis. In addition, the mechanistic research suggests that there are some common processes between the two diagnoses which may have implications for the treatment of these disorders when they occur comorbidly. Research into the treatment of trauma could not only help to identify whether or not these treatments are effective for people with psychosis but it may also help to contribute to the evidence for the mechanisms between trauma and psychosis.

This review aims to address these issues with the following questions:

- Are PTSD treatments effective for treating trauma symptoms in people with psychosis?
- Do trauma-focused therapies have any additional impact on the symptoms of psychosis?

Method

Search terms were chosen by identifying keywords from key papers. The MeSH and Index Terms were also explored to identify which terms needed to be selected for each part of the primary question i.e. psychosis, PTSD and psychological treatment. A database search was run on PubMed and PsycNET using the identified search terms. In PsycNET the narrower terms were selected of the relevant Index Terms to match the search design of PubMed which would include anything within the broader category terms. Where possible, articles

written in English only were selected. The searches for each part of the question (psychosis, PTSD and psychological treatment) were run individually. The psychosis related search was run with the trauma related search. This combined search was then run, adding the treatment related search. The reference lists of all the articles which met the inclusion criteria were examined to identify any further papers. For details of the search see *Figure 1*.

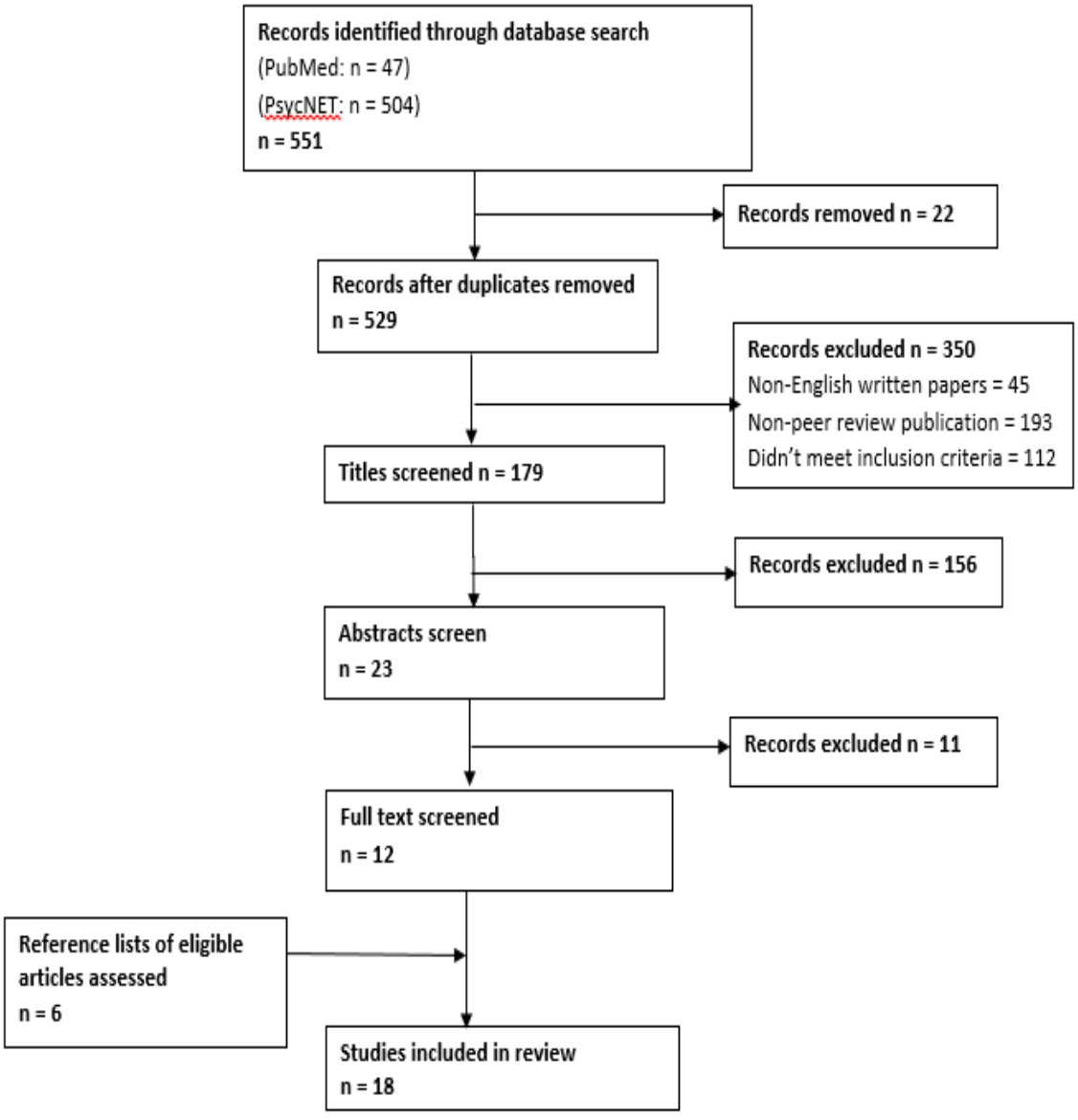

Figure 1: Flow chart detailing the selection of eligible articles

Inclusion and Exclusion Criteria

Papers were included if they evaluated a psychological treatment of a traumatic experience (needed to be a measure of PTSD but did not need to meet full criteria) in adults (18 years or more) who had a psychosis related diagnosis e.g. schizophrenia, schizoaffective disorder. Exclusion criteria were: articles not written in English; treatment of children or adolescents; non-peer review (e.g. conference abstracts, book chapters, book or article reviews, press releases, theses); pharmacological or medical treatment (e.g. medication, ECT); focus of the paper was not testing the treatment of trauma e.g. links between trauma and psychosis, prevalence rates, induced psychosis, description of treatment only.

Results

Eighteen studies met the inclusion criteria. Although the link between traumatic experiences and psychosis has been supported in a number of studies, the treatment of trauma in psychosis is still in its infancy and rigorous methodological studies are sparse. Many of the eligible studies would not reach the threshold for quality bias tools often used in systematic reviews (e.g. Cochrane Risk of Bias Assessment Tool), however these were used as a guide to think about the methodological qualities and possible biases. The methodological biases will be explored throughout the review.

Are PTSD treatments effective for treating trauma in people with psychosis?

Twelve articles conducted studies on five different trauma-focused cognitive therapies, two articles focused on EMDR, two articles conducted randomised studies comparing prolonged exposure (PE) with EMDR and two articles conducted research on two alternative trauma-focused approaches. Some of the studies had broader inclusion criteria and included people with a diagnosis of Severe Mental Illness (SMI) which included diagnoses in addition to schizophrenia spectrum disorders. Unless SMI is specified, all studies were conducted on individuals with a diagnosis of a schizophrenia spectrum disorder. For full details about the studies see Tables 1-2.

Table 1: *All included studies and a descriptions of the main study characteristics and outcomes for PTSD*

Author	Study design	Number of participants	Assessment points	Therapy	Outcome for PTSD
Trauma Focused Cognitive Therapies					
Trauma-Focused CBT					
Callcott, Standart & Turkington (2004)	Case Studies	2	Not specified	Trauma-focused CBT	Case 1: Over 5-months of treatment showed a reduction in symptoms of PTSD and reduction of intrusive images. Unknown if she continued to meet criteria for PTSD. Case 2: Reduction in symptoms of PTSD and no longer scored above the recommended clinical cut off for diagnosis on the Impact of Events Scale.
Kayrouz & Vrklevski (2015)	Case study	1	Pre-treatment, post-treatment	Trauma-Focused CBT and imagery rescripting	At pre-treatment, the client met criteria for a diagnosis of PTSD. Post-treatment, the client had a 70% reduction in PTSD symptoms and no longer met diagnostic criteria.
Kevan, Gumley & Colette (2007)	Single-N Experimental case study	1	Pre-treatment, Follow-up	Two phase intervention: written elaboration of trauma; cognitive restructuring	Pre-treatment, the client met criteria for a diagnosis of moderate-severe PTSD. Post-treatment, the client had a reduction in symptoms and now had a score representing mild symptoms but no longer met criteria. One month post-treatment reduction in symptoms and no longer met diagnostic criteria for PTSD

CBT with exposure therapy					
Frueh, Grubaugh, Cusack, Kimble, Elhai & Knapp (2009)	Open trial evaluation	20	Pre-treatment, post-treatment, 3MFU, session-by-session	Multicomponent Cognitive-Behavioural intervention	100% had PTSD diagnosis pre-treatment. 13 completed treatment. PTSD symptoms significantly improved from pre to post-treatment and pre-treatment to 3MFU. At 3MFU, 10/13 no longer met criteria for diagnosis of PTSD and 10/13 were considered treatment responders (>=15 point decrease). Only one participant failed to lose their diagnosis AND was not a treatment responder. Significant improvement in PTSD symptoms from session 1 to session 22 and session 15 to session 22 (individual exposure sessions) but there was no significant change from session 1 to session 14 (group component). Most significant gains were made Session 1 to session 4 (psychoeducation and anxiety management) and session 19 onwards (end stages of exposure).
Cognitive Restructuring Programme					
Rosenberg, Mueser, Janowski, Salyers & Acker (2004)	Pilot study (non-controlled)	22	Pre-treatment, post-treatment, 3MFU	CR Programme	Data was based on 12 participants who completed treatment and provided follow-up data. 10/11 participants had an improvement in their total CAPS score from pre to post treatment and one client had got worse at the end of treatment. The change in score from pre to post treatment was statistically and clinically significant. On average, treatment gains were maintained and improved at the 3MFU but looking at the results 3 clients showed a deterioration and 7 clients showed an improvement from post-treatment to 3MFU. 100% met criteria for a diagnosis at pre-treatment. This reduced to 64% at post-treatment and 50% at 3MFU. The change was not significant at post-treatment but was at follow-up.

Hamblen, Janowski, Rosenberg & Mueser (2004)	Case Studies	3 (2 reported on in this review)	Pre-treatment, post-treatment, 3MFU	CR Programme	Case 1: Diagnosis of extremely severe PTSD at pre-treatment. At 3MFU had a 12-point decrease in symptoms and still met criteria for a diagnosis. However, client reported a clinically meaningful change in her functioning. Case 2: Diagnosis of mild-moderate PTSD pre-treatment. Post-treatment had a 6-point decrease and no longer met criteria for a diagnosis. At 3MFU, symptoms of PTSD had decreased by a further 5-points (total reduction of 11-points from pre-treatment).
Marcello, Hilton-Lerro & Mueser (2009)	Case Study	1	Pre-treatment, post-treatment, every third session	CR Programme	Pre-treatment the client scored in the high range for PTSD. He had a decline over the course of treatment and at post-treatment had a reduction of 27-points and no longer scored in the severe range.
Lu et al., (2009)	Pilot study (non-controlled)	19	Pre-treatment, post-treatment, 3MFU, 6MFU	CR Programme	Participants had a significant improvement in PTSD symptoms at post-treatment, 3MFU and 6MFU. These improvements reflected improvements from the moderate-severe range pre-treatment to the moderate range at 3 and 6MFU. Based on the PCL, 100% met criteria for diagnosis of PTSD. This decreased to 69% at post-treatment and 33% at 3MFU but increased to 58% at 6MFU. These changes were all statistically significant. Rates were higher and less significant when using the PDS.

Mueser, Rosenberg & Rosenberg (2009)	Randomised Controlled Trial	108	Pre-treatment, post-treatment, 3MFU, 6MFU	CR Programme vs. TAU	CR was not more effective than TAU at eliminating PTSD diagnosis but it was significantly better at reducing PTSD symptoms. When the analysis was run only on those with severe PTSD pre-treatment, the effect sizes increased for this group and decreased for those with mild-moderate PTSD. In the whole sample, 73% still met diagnostic criteria at 6MFU. This was higher for those with severe pre-treatment PTSD (78%) and similar for those with mild-moderate PTSD (60%).
Mueser et al., (2007)	Pilot study (non-controlled study)	80 (from 11 groups)	Pre-treatment, post-education, post-cognitive restructuring, post-treatment, 3MFU.	Trauma Recovery Group (group adaptation of the CR Programme)	In the total sample, the average total score on the PCL was 64.10 (SD=9.03) indicating severe symptoms of PTSD. For the full group, there were significant differences on the PCl between pre-treatment and post-cognitive restructuring, pre-treatment and post-treatment and pre-treatment and follow-up. Similar significant results were found for treatment completers but not drop-outs. For PTSD diagnosis, 100% met diagnostic criteria at pre-treatment. There was a significant reduction between pre-treatment and post-education, pre-treatment and post-cognitive restructuring, pre-treatment and post-treatment and pre-treatment and follow-up. 77% of treatment completers and 89% of drop-outs still met diagnostic criteria at 3MFU. Data only available for 41 participants. Significant improvement in PTSD from pre to post-treatment and pre to 3MFU but 70% still met diagnostic criteria at 3MFU. Also noted a significant improvement in treatment drop-outs and 88% met criteria at 3MFU.

Cognitive Recovery Intervention					
Jackson et al., (2009)	Single-blind randomised controlled trial	66	Pre-treatment, post-treatment, 12MFU	Cognitive Recovery Intervention (CRI) vs. TAU	At pre-treatment, 23% had scores which indicated a diagnosis of PTSD. Post-treatment analysis is based on 46 participants for which data was available. There was a borderline significant difference *(p=0.05)* between the groups post-treatment with the CRI group having lower scores. Results suggest that those who met diagnostic criteria pre-treatment benefited most from the treatment with a considerable larger reduction in scores compare to TAU. Post-treatment, significantly more people in the treatment group had a 25% or more reduction in symptoms and maintained this at 12MFU.
STAIR					
Trappler & Newville (2007)	Pilot study (non-randomised comparison)	48 (24 in each group)	Pre and post treatment	Skills Training in Affect Regulation (STAIR) vs. Supportive Group Therapy.	There was a significant reduction in symptoms of PTSD in the STAIR group but not the control form pre-post intervention (groups not compared to each other).
EMDR					
Laugharne, Marshall, Laugharne & Hassard (2014)	Case Vignettes	4 (3 reported in this review)	Not specified	EMDR	Case 1: Particular reductions in PTSD symptoms of nightmares and flashbacks. Results maintained 6-years later Case 2: Post-treatment significant reduction in trauma symptoms, particularly distress associated with nightmares. Effects maintained 2-months post-treatment. Effects maintained 3-years later but still struggles with intrusive thoughts. Case 3: Reduction in impact of trauma and effects maintained 4-years later

van der Berg & van der Gaag (2012)	Open pilot trial	27	Pre and post-treatment	EMDR	Pre-treatment: 100% met diagnostic criteria for PTSD. Only 23% still met criteria for diagnosis post-treatment. There was a significant reduction in PTSD symptoms from pre to post-treatment.
Prolonged Exposure vs. EMDR					
de Bont, van Minnen & de Jongh (2013)	Within-group controlled study	10	20-weekly assessment before, during and after treatment. Pre-treatment, post-treatment and 3MFU.	PE vs. EMDR	All participants met criteria pre-treatment. There was a significant reduction in PTSD symptoms over the treatment phase and maintained in the post-treatment phase representing large effect sizes. Effects were maintained at follow-up. Post-treatment, 6/8 treatment completers no longer met criteria for PTSD and this increased to 7/8 at follow-up (3 in EMDR and 4 in PE).
van der Berg, de Bont, van der Vleugel, de Roos, de Jongh, van Minnen & van der Gaag (2015)	Randomised Controlled Trial	155	Pre-treatment, post-treatment, 6MFU	PE vs. EMDR vs. WL	Based on the CAPS total there was a significant difference between both treatments and the WL group at post-treatment and 6MFU but there was no difference between the two treatment conditions. Participants in the treatment conditions were more likely to achieve and maintain a loss of diagnosis compared to the WL condition.

Video Testimony					
Strous et al., (2005)	RCT	24	Pre-treatment; 4 months, 8 months	Video Testimony vs. TAU	At pre-treatment, 38% met criteria for a diagnosis of PTSD. At the second interview (post-treatment) 19% met criteria for a diagnosis. There was a significant reduction in PTSD symptom severity scores post-treatment, particularly on the avoidance subscale. There was a significant reduction in the intensity of all clusters of PTSD symptoms (avoidance, intrusion, arousal). There was only a significant change in frequency of symptoms on the avoidance subscale. The average proportional change was 0.68(SD=0.34). 6 subjects showed no change, 1 subject had an increase and 9 participants had an improvement of 30% or more. The intrusion cluster had the greatest change followed by avoidance and then arousal.
Written Emotional Disclosure					
Bernard, Jackson & Jones (2006)	Experimental randomised study	23 (12 experimental vs. 11 control)	Pre-intervention; 4-6 week post-intervention	Written emotional disclosure vs. Control (write about neutral topic)	13 participants (8 experimental, 5 controls) met cut off for PTSD diagnosis. Results based on 22 participants. Significant reduction in severity of traumatic symptoms in experimental group but not control group, representing a small effect size. 83% in emotional group had a reduction in total severity compared to 40% in the control group, this was particularly noted on the avoidance subscale.

Trauma-focused cognitive therapies

A number of case studies have examined trauma-focused cognitive therapies based on formulations using the Ehlers and Clark (2000) model of PTSD. Three papers (Callcott, Standart, & Turkington, 2004; Kayrouz & Vrklevski, 2015; Kevan, Gumley, & Coletta, 2007) present four cases treated with TF-CBT in 12, 17, 7 and 10 sessions respectively. Three out of four cases report a significant reduction in their symptoms so they no longer meet diagnostic criteria. The fourth case did report a reduction in symptoms but it is unknown if she continued to meet diagnostic criteria.

Although these studies represent promising outcomes for TF-CBT, they do not provide any long-term outcomes beyond one-month post-trauma and they only represent successful outcomes which could be a true representation or a reporting bias. As they are single cases, they cannot be generalised beyond the individual cases. However, they are evaluating an intervention (TF-CBT) that already has considerable support using randomised controlled trials (RCT) in populations without psychosis. Therefore these findings suggest that TF-CBT could be an effective intervention for people with psychosis and is worthwhile investigating further on other individuals with psychosis to contribute to the existing evidence for TF-CBT.

Frueh et al., (2009) evaluated a CBT intervention incorporating exposure therapy, on 20-outpatients experiencing PTSD following a range of lifetime traumas. They found significant improvements in PTSD symptoms post-treatment with further gains at 3-months. The majority of the participants who completed the follow-up had lost their diagnosis or were considered treatment responders due to a significant improvement in PTSD symptoms. There was no control group so it is unknown if CBT is more effective than treatment as usual (TAU) and the final analysis was only conducted on a small number of the sample. Participants were self-selected as they expressed an interest, suggesting they have a motivation for therapy. Despite the limitations, the findings suggest this intervention is worth exploring further as an intervention for treating PTSD in people with psychosis.

The largest influence in this field has been Mueser and colleagues with the development of the Cognitive Restructuring Programme (CR: Mueser, Rosenberg, Jankowski, Hamblen, & Descamps, 2004), a 12-16 session intervention designed to treat PTSD in people with SMI. Unless specified, CR studies are based on people with SMI.

The initial pilot study (Rosenberg, Mueser, Jankowski, Salyers, & Acker, 2004) was conducted with 22-outpatients who had experienced a range of lifetime traumas. Ten out of eleven participants who completed the post-treatment assessment showed a clinically and statistically significant improvement in PTSD symptoms and maintained this after 3-months. However, 25% (3/12 who provided 3-month data) showed deterioration after 3-months. There was a significant change in diagnosis from pre-treatment to follow-up with a reduction from 100% of the sample receiving a diagnosis to 50%. Although this study statistically identifies improvements in symptoms the analysis is only based on 13 participants and those who continue to meet diagnostic criteria is high. They also report a high retention rate of 86%, for those who completed more than six sessions, however a further five people dropped out just after the cut-off in session six or seven.

Two cases from the above pilot study have been published separately (Hamblen, Jankowski, Rosenberg, & Mueser, 2004). Both cases were people diagnosed with schizoaffective disorder and completed the full 16-sessions. One female had a reduction in her symptoms of PTSD at the 3-month follow-up but continued to meet diagnostic criteria. The second case experienced a reduction in his symptoms of moderate-PTSD and no longer met diagnostic criteria and maintained this at 3-month follow-up. It is important to note that the approach was adapted for this client as he presented with cognitive disorganisation and illogical speech. This second case implies that some flexibility was used in the delivery of the treatment during the pilot study (Rosenberg et al., 2004) which, although clinically appropriate, begs the question of the standardised delivery of the intervention and thus the replicability of the intervention. Marcello, Hilton-Lerro and Mueser (2009) also adapted CR for a client who had a diagnosis of schizoaffective disorder and PTSD who also presented with impaired memory, attention and problem solving skills. Following 16-sessions of CR she had a considerable reduction in her symptoms of PTSD but remained in the borderline range for a diagnosis.

Lu et al., (2009) found that CR showed some success at reducing symptoms and diagnosis of PTSD in 19-outpatients from ethnic minority groups post-treatment and maintained 3-months later. They did not compare post-treatment and follow-up scores in their analysis but visual inspection of the results shows an increase in those meeting diagnostic criteria from the 3-month to the 6-month follow-up (33% - 58%) which questions the maintenance of treatment effects in this population.

The results of the cases studies, the initial pilot and an evaluation of the CR programme with participants from ethnic minorities, suggests there is some clinical benefit for CR in treating PTSD in people with psychosis. However, following 16-sessions and follow-up a high number continue to meet diagnostic criteria. Worryingly, although post-treatment scores are significantly different to pre-treatment a large number had an increase in their symptoms at a follow-up by Lu et al., (2009), questioning the maintenance of the effects. The larger studies (Lu et al., 2009; Rosenberg et al., 2004) are considered to be stronger methodologically as they have larger samples to perform statistical analysis and are able to reduce some bias in the way they account for treatment drop-outs in the analysis. However, because they are pilot studies they do not have a control condition and thus there is no randomisation or blind assessment which are potential biases. In addition to these limitations, it is also difficult to know the adherence to protocol as the single case studies taken from this suggest that adaptations were made. Results are also based on a small number of people who completed the intervention. It is important to consider potential bias from not including them: do they represent a particular type of participant or do they have a common reason for not attending the follow-up assessments?

Mueser, Rosenberg and Rosenberg (2009) addressed one of these limitations, whether CR is better than TAU. They recruited 108-outpatients who had experienced a range of lifetime traumas onto a RCT comparing CR with TAU. They found that 16-sessions of CR were more effective than TAU at eliminating PTSD diagnosis and reducing PTSD symptoms. When they split the groups by pre-treatment PTSD severity the difference between groups only remained significant for those with severe PTSD. Mueser et al. do not report the content of TAU and therefore what the intervention was being compared to.

Mueser et al., (2007) further adapted this intervention to be delivered in a 21-session group. Data was available for 41 of 80 participants from 11-groups. They found a significant improvement from pre to post-treatment and pre-treatment to 3-month follow-up however, over 70% still met diagnostic criteria at the follow-up. They also identified a significant reduction in PTSD diagnosis in the treatment drop-outs. They looked at changes following each of the main treatment components, however despite significant results being found, all comparisons were done with pre-treatment scores and not the previous assessment point so this work shows that participants made significant changes early in the intervention and these were maintained, not if they made further significant gains at key points.

Despite significant findings, a high number continued to meet diagnostic criteria and this finding was also found in treatment drop-outs. Without comparisons it is unknown if this is any better than TAU but the results suggest it is not as effective as the individual format.

Other interventions that could be considered trauma-focused cognitive therapies have also been explored. Jackson et al., (2009) developed the Cognitive Recovery Intervention (CRI) to help people psychologically adjust and recover following a first episode of psychosis. Although they did not develop this as a trauma specific treatment, they recognised the traumatic nature of the experience and PTSD was an outcome measure. At post-treatment, significantly more people in the CRI group had a 25% or more reduction in their symptoms of PTSD compared to TAU; this was maintained at the 6 and 12-month follow-up. They found that those who had higher scores at baseline benefitted from the intervention most. This suggests that compared to TAU, this could be an effective intervention for treating trauma in people with psychosis and is more effective for those with greater symptom severity.

Finally, Trappler and Newville (2007) wanted to demonstrate that treatments for complex trauma (Cloitre et al., 2002) could be effective. Twenty-four inpatients received the first stage of Cloitre's two-stage treatment for complex trauma (STAIR: see Table 1) over 12, weekly, group sessions and were compared with 24 age-matched controls that had not volunteered for the intervention and received supportive group psychotherapy. They found a significant reduction in symptoms of PTSD in the STAIR group but not the control group from pre to post treatment. It is unknown how many patients met criteria for PTSD and the nature of the traumas experienced. The patients in the STAIR group volunteered for the study suggesting an initial motivation to take part in trauma therapy but were compared to a group who had not volunteered but were still expected to engage in a trauma supportive intervention. As the treatment group were not compared statistically to the controls and the controls were not equivalent (i.e. not volunteered for an intervention) it is difficult to say whether this is an effective intervention for treating trauma in people with psychosis.

Summary of trauma-focused cognitive therapies

Interventions reviewed as trauma-focused cognitive therapies were case studies of TF-CBT, a CBT intervention incorporating exposure therapy, the CR programme, CRI and STAIR.

TF-CBT was delivered in 7-17 sessions, in line with the NICE guidance (2005). The promising results suggest that this intervention should be tested beyond a single-case design in people with psychosis to provide more evidence that this intervention is also effective in people with psychosis. Similarly, for CBT incorporating exposure (Frueh et al., 2009) there is promising initial evidence but further research needs to compare it to TAU as this is not a previously tested intervention.

CR is the biggest influence with the strongest methodological designs, as it considered potential biases in the studies and controlled for these (e.g. randomisation, control groups, blind assessment), but the results are less convincing. Although statistically significant in some cases, a high number of people continue to meet diagnostic criteria and the long-term effects are not promising. It is not as effective in a group format. Further research needs to look at where the differences occur, what the active components of the intervention are and compare to other active treatments. It could be that the stronger methodology controlling for potential biases is showing the true effects but without this for other interventions it is unclear. CRI also showed some promising outcomes but further work is needed to look at the results in a clinical group.

Considerably more work needs to be done and methodologies need to be strengthened as discussed. At this stage evidence suggests that trauma-focused cognitive therapies to treat PTSD are effective for people with psychosis.

EMDR

EMDR is also recommended in the NICE guidelines (2005) for PTSD. Following up to 6, 90-minute sessions, van der Berg and van der Gaag (2012) found that 88.3% of the sample no longer met diagnostic criteria for PTSD. Participants in this study were able to receive TAU, alongside EMDR, and some patients received additional support on coping skills, which could influence the outcome. van der Berg and van der Gaag (2012) do not compare these results to TAU nor report long-term outcomes of the therapy but Laugharne, Marshall, Laugharne and Hassard (2014) have provided some tentative support for the latter in case-study descriptions. They presented the cases of three adult males who received 2-3 sessions of EMDR for traumas experienced in adulthood and maintained positive outcomes 3-6 years post-treatment. Laugharne et al., (2014) do not report standardised outcome measures so whether or not the clients met criteria pre-treatment or the extent of symptom recovery is unknown. They only represent male clients, who had experienced single event traumas in adulthood and had successful outcomes. The results are also strong and inconsistent with van der Berg and van der Gaag's (2012) finding that

an average of 4.72 sessions was required to observe significant outcomes, but this could be due to the treatment of single rather than multiple traumas (discussed later). The evidence for EMDR is only based on two studies but it suggests that EMDR is effective for treating PTSD in people with psychosis. This can be considered in conjunction with the strong evidence for PTSD in people without psychosis and suggests these results are application in a population with psychosis. Further studies need to examine the outcomes of EMDR for single and complex trauma and assessing the long-term outcomes.

Prolonged exposure vs. EMDR

Only two studies have compared active therapies and both studies compared prolonged exposure (PE: Foa, Hembree, & Rothbaum, 2007) with EMDR (Shapiro & Solomon, 1995). The previous sections provide initial evidence that EMDR (van den Berg & van der Gaag, 2012) and exposure therapies (Frueh et al., 2009) could be effective interventions.

Following 12-sessions of PE or EMDR, de Bont, van Minnen and de Jongh (2013) demonstrated a significant reduction in symptoms post-treatment and at 3-months. Seventy-five percent of treatment completers in each group no longer met criteria post-treatment (100% in PE group 3-months). Although clients were randomised to treatment, the groups were not compared. van der Berg et al., (2015) strengthened these results by conducting a RCT comparing PE and EMDR to a waitlist-control (WL). Post-treatment and at 6-month follow-up, there was a significant difference between the active treatments and the WL group on symptoms of PTSD, but there was no significant difference between the active treatments. These results suggest that trauma-focused therapies are more effective for treating PTSD in people with psychosis than WL.

These are the only studies to compare two active treatments and results suggest that trauma focused interventions (PE, EMDR) are more effective at treating PTSD in people with psychosis than TAU. Further research needs to replicate these results with a larger sample to detect power. It is important to report details of the sample (e.g. trauma type) so we can determine who this is effective for. Also, PE is not identified in NICE (2005) so it would be beneficial to include TF-CBT so recommended interventions are compared.

Other trauma-focused therapies

Two studies have looked at alternative treatment approaches.

Strous et al., (2005) examined the video testimony method in 24 in-patients who had been involved in Nazi persecution. The WL had an increase in symptoms of PTSD. The testimony group had a significant reduction in symptoms but not in diagnosis. No between groups comparisons were completed nor were immediate post-treatment scores given. It is important to note the increase in scores in the WL which is strange given the chronicity of the trauma. There was also little information on any interventions that may have been received between treatment being completed and the final assessment. Few met criteria for PTSD so it may be difficult to detect effects for this intervention. There appears to be some positive outcomes, but due to all the limitations it is difficult to draw firm conclusions. Future work needs to be completed to address the limitations above. This is a newer, less tested intervention for PTSD, and thus a stronger methodology needs to be adopted to control for potential biases and also be able to detect sufficient power for statistical analyses.

Bernard, Jackson and Jones (2006) examined the effectiveness of the written emotional disclosure technique (Pennebaker, 1997) in 23-outpatients in the recovery phase following their first episode of psychosis. They found a small effect size for the written emotional disclosure group based on the 4-6 week follow-up with 83% of participants showing a reduction in scores compared to 40% of the control group. It is unknown how many participants actually met the criteria for PTSD at the beginning of the study, therefore whether these results are clinically significant. However, an 83% improvement and a small effect size are promising for a short-term intervention. If participants felt distressed after the task they were able to discuss this with a psychologist. They did not report how many participants utilised this and therefore the potential influence this may have had. This study has adopted a good design as it has controlled for potential bias by including a control condition and randomising participants. This study would benefit from a longer follow-up and better reporting on the clinical symptoms pre and post-intervention and how post-writing care is utilised to strengthen the findings. It would be beneficial to evaluate more sessions to see if that can boost clinical effects. The effects for additional traumas should also be investigated as these results suggest this intervention could be effective at treating trauma symptoms in people with psychosis.

Summary

Trauma-focused cognitive therapies (TF-CBT, CRI) have found promising outcomes but have weaker methodologies. CR has adopted a range of methodological designs, including

an RCT which has accounted for a number of biases, but has found less promising outcomes. EMDR is based on only a few studies but uses a tested protocol and has accounted for bias in one of its studies, suggesting this is a beneficial intervention which maintains positive outcomes over time. PE, not recommended in NICE (2005), is also a promising intervention. Briefer interventions (video testimony, written emotional disclosure) have shown promising outcomes in specific settings and their initial findings warrant further investigation.

These early results suggest that trauma-focused therapies are able to ameliorate PTSD in people with psychosis but more work needs to be done. Many of the studies have tested new interventions for PTSD and thus need to adopt strong methodological designs which can control for the potential biases in research but also test whether or not the interventions are better than no intervention at all or better or equivalent to an already supported intervention. Where studies have tested currently supported interventions (TF-CBT, EMDR) it can be argued that the intervention already has considerable support for treating PTSD, the main limitation is that the support is not specific to that population. Therefore, evidence from other designs can be considered in light of the already established findings. Studies evaluating these interventions to address these methodological limitations so better conclusions can be drawn.

Do trauma-focused therapies have any additional impact on the symptoms of psychosis?

Although the treatments reviewed are aimed at intervening with symptoms of trauma and PTSD, it is important to consider the impact treatments have on comorbid symptoms, in particular symptoms of psychosis. This will not only help to identify the most beneficial trauma interventions for people with psychosis but also contribute to the growing evidence base on the links between trauma and psychosis, particularly thinking about what symptoms or factors in the experience of trauma may lead to the development of or increase the risk of developing symptoms of psychosis. Such evidence may also help to contribute to the literature looking at symptom specificity and the potential diagnostic overlap between trauma and psychosis. Of the 18 studies reviewed, 12 reported on symptoms of psychosis (*Table 2).*

Firstly, the trauma-focused cognitive therapies have found some impact. Two of the case studies which reported the impact of trauma focused CBT have also reported on symptoms of psychosis. Callcott et al., (2004) identified that both of the cases they described were experiencing current symptoms and were prescribed antipsychotic medication. They only

reported the outcome of one of the cases who had a significant reduction on the Comprehensive Psychopathological Rating Scale. Kayrouz and Vrklevski (2015) also reported on a case who was treated with trauma-focused PTSD. The case was prescribed antipsychotic medication such that he was not experiencing current positive symptoms. They noted no change to positive symptoms.

The CR programme reported on symptoms of psychosis in the majority of its studies. Using the Brief Psychiatric Rating Scale (BPRS: Lukoff, Nuechterlein, & Ventura, 1986), Rosenberg et al., (2004) found no significant change post-treatment with some participants having a worsening in scores. At the 3MFU, some participants continued to be worse than baseline but overall there was a significant improvement, however, this was mostly explained by the affect subscale rather than subscales more specific to psychosis. Hamblen et al., (2004) presented cases from the Rosenberg et al., (2004) pilot study and Marcello et al., (2009) reported a single-case who was treated with the programme. Hamblen et al. reported that both cases had a reduction in scores on the BPRS post-treatment and at the 3 month follow-up. Marcello et al. also a reported a reduction although this was not formally assessed. When provided to ethnic minority groups, Lu et al., (2009) found no change on the BPRS post-treatment but by the 6 month follow-up, 92% had improved scores. The group-adaptation of CR and the RCT did not report on psychotic symptoms.

Trappler and Newville (2007) also assessed symptoms of psychosis using the BPRS following STAIR programme. They found that participants in the CBT group had a significant decrease in positive symptoms but this was not found in the control group.

The Cognitive Recovery Intervention (CRI: Jackson et al., 2009) and CBT incorporating exposure (Frueh et al., 2009) did not assess symptoms.

Both studies of EMDR reported on symptoms of psychosis. van der Berg and van der Gaag (2012) reported that 8/27 participants were experiencing hallucinations and 5/27 were experiencing delusions pre-treatment. Following the intervention they found a significant reduction with 5/8 no longer experiencing hallucinations. They did not report follow-up data for delusions. However, Laugharne et al., (2014) reported the long-term follow-up for three cases who were prescribed antipsychotic medication such that they were no longer experiencing current positive symptoms. Two of the cases reported no change to their psychotic symptoms. The third case had experienced relapses in psychosis but reported

that the content of their positive symptoms was no longer linked to their traumatic experience.

Both studies which compared prolonged exposure and EMDR recruited participants who were experiencing current symptoms of psychosis, some of which were on medication. Unfortunately, van der Berg et al., (2015) reported that approximately half of the sample was experiencing hallucinations or delusion pre-treatment but they did not report any follow-up data after the intervention. de Bont et al., (2013) reported that there was a low presence of delusions in the sample. With respect to hallucinations, only one participant reported an increase in symptoms with the remaining reporting no increase in symptoms. They found a significant decrease in psychosis-prone thinking post-treatment.

Finally, Strous et al., (2005) found no change in symptoms of psychosis following the video testimony method. Bernard et al., (2006) did not report the effects of the written emotional disclosure technique on symptoms of psychosis.

Summary

Three of the studies reported no change in symptoms of psychosis following their respective interventions: TF-CBT (Kayrouz & Vrklevski, 2015), EMDR (Laugharne et al., 2014) and Video Testimony (Strous et al., 2005). In contrast, Callcott et al., (2004) and van der Berg and van der Gaag (2012) found improvements in symptoms post TF-CBT and EMDR respectively. In addition, CR programme, STAIR and PE compared to EMDR all found improvements in symptoms of psychosis. This evidence is very much in its infancy. For the studies reported here only a small number of the total samples were currently experiencing active symptoms and thus the numbers were too low to report statistical calculations. If reported, many participants were prescribed antipsychotic medication and so symptoms were either reduced or absent, making it difficult to identify the true effects of these intervention on symptoms of psychosis. Also of note, the majority of studies reported comorbid outcomes based on broad questionnaires, not specific to symptoms of psychosis so it could be that reduction in other psychiatric symptoms may account for the change, These early findings suggest that the interventions are not harmful for people with symptoms of psychosis but they do not provide any clear outcomes for whether it is effective at this stage. This review highlights that although researchers have moved forward to start looking at whether trauma interventions are effective for people with psychosis, they have not drawn together the emerging evidence for the link between

Table 2: ***All included studies and the impact of the interventions on symptoms of psychosis***

Author	**Current active Symptoms**	**Medication**	**Outcome on psychotic symptoms**
Trauma Focused Cognitive Therapies			
Trauma-Focused CBT			
Callcott, Standart & Turkington (2004)	Case 1: Yes Case 2: Yes	Case 1: Yes Case 2: Yes	Case 1: Not reported Case 2: Significant reduction in scores on the Comprehensive Psychopathological Rating Scale (CPRS) and Scale for assessment of negative symptoms (SANS).
Kayrouz & Vrklevski (2015)	No on-going positive symptoms, residual negative symptoms	Yes	No change to positive symptoms. Improvement in negative symptoms (became more socially engaged).
Kevan, Gumley & Colette (2007)	No current symptoms	Yes	Not reported
CBT with Exposure			
Frueh, Grubaugh, Cusack, Kimble, Elhai & Knapp (2009)	Not reported	Not reported	Not assessed
Cognitive Restructuring Programme			
Rosenberg, Mueser, Janowski, Salyers & Acker (2004)	Not reported	Not reported	At post-treatment, four clients had more severe BPRS scores and 7 clients had less severe scores. Overall, there was no difference in the group. At the 3MFU, three clients had more severe scores and 9 clients had less severe scores. Overall this was a significant improvement. However, these changes were mostly explained by the affect subscale.

Hamblen, Janowski, Rosenberg & Mueser (2004)	Case 1: Yes Case 2: Yes	Case 1: Yes Case 2: Yes	Case 1: Pre-treatment the client reported moderate auditory hallucinations. She had a 7-point decrease in on the BPRS at 3MFU but specific change in hallucinations was not reported. Case 2: Pre-treatment, the client reported somatic delusions, paranoid ideation and related hallucinations on the BPRS. At post-treatment, there was a 21-point decrease and a further 7-point decrease at 3MFU. Specific decreases in somatic delusions, hallucinations and paranoid ideation.
Marcello, Hilton-Lerro & Mueser (2009)	Yes	Not clear	At the initial assessment the client reported the following psychotic symptoms: paranoid ideation, mild auditory hallucinations and tangential thinking. Although not formally assessed, post-treatment the client reported a decrease in paranoid ideation.
Lu et al., (2009)	Not reported	Not reported	Using the BPRS, there was no significant improvement from pre to post-treatment but there was a significant improvement at 3MFU (67% had improved scores) and 6MFU (92% had improved scores).
Mueser, Rosenberg & Rosenberg (2009)	Not reported	Not reported	Not reported
Mueser et al., (2007)	Exclusion criteria: not floridly psychotic or disorganised so as to interfere with ability to comprehend material Not reported	Not reported	Not assessed

Cognitive Recovery Intervention			
Jackson et al., (2009)	Yes (not an exclusion criteria) Only baseline PANSS scores reported	Yes	Not reported
STAIR			
Trappler & Newville (2007)	Assumed based on BPRS scores	Not reported	Significant decrease in positive symptoms in participants in the CBT group, but not in the control group, based on the BPRS.
EMDR			
Laugharne, Marshall, Laugharne & Hassard (2014)	Case 1: No current symptoms Case 2: No current symptoms Case 3: No current symptoms	Yes Yes Yes	Case 1: continues on medication but no change to psychotic symptoms Case 2: No change to symptoms. One relapse. Case 3: Has experienced relapses in psychosis since treatment completion but content no longer linked to the trauma
van der Berg & van der Gaag (2012)	Some	Yes	Pre-treatment, 8/27 were experiencing hallucinations and 5/27 delusions. Significant reduction post-treatment. 5/8 no longer experienced hallucinations post-treatment and 3/8 had persistent hallucinations. No data available for post-treatment experience of delusions.

Prolonged Exposure vs. EMDR			
de Bont, van Minnen & de Jongh (2013)	Yes	Not reported	There effect of PTSD treatment on auditory hallucinations or delusions. During treatment, 9 had no increase in symptoms. One participant had an increase in auditory hallucinations following a stressful life event. Significant decline in psychosis-prone thinking from pre to post-treatment but not pre-treatment to follow-up. Low presence of delusions.
van der Berg, de Bont, van der Vleugel, de Roos, de Jongh, van Minnen & van der Gaag (2015)	Some of the sample	Yes	Pre-treatment: 62% of the sample was experiencing delusions and 40% were currently experiencing hallucinations. Post-treatment data was not reported.
Video Testimony			
Strous et al., (2005)	Excluded if they had severe psychotic disorganisation that would prevent participation in a video testimony. Not reported	Not reported	No change on positive and negative syndrome scale from pre to post-treatment.
Written Emotional Disclosure			
Bernard, Jackson & Jones (2006)	Not reported	Not reported	Not assessed

trauma and psychosis and made the comorbid symptom a focus of the research, barely even a secondary outcome. At this stage, these findings do not help us add anything to the research on the link between trauma and psychosis or the potential mechanisms.

Discussion

Traumatic experiences have been found to increase the risk of the development of psychosis (Kilcommons & Morrison, 2005; Varese et al., 2012). The NICE guidelines (2014) for psychosis and schizophrenia recommend that PTSD should be assessed routinely in those with symptoms of psychosis and where PTSD is diagnosed the treatment should follow the NICE guidelines (2005) for PTSD. However, one of the common exclusion criteria of PTSD studies is the presence of positive symptoms (Spinazzola et al., 2005) therefore it is unknown whether or not these recommended interventions are actually effective in this population. This review aimed to address this question by reviewing the evidence in relation to the treatment of PTSD in psychosis. In addition, research has highlighted a strong link between trauma and psychosis and has started to explore potential mechanisms of this relationship. The review also considered whether the interventions had additional impact on symptoms of psychosis and thus how this may contribute to the growing evidence on the link and mechanisms between trauma and psychosis. Eighteen studies were reviewed.

Treatment approaches reviewed included a range of trauma-focused cognitive therapies; EMDR; PE; the video testimony method; and, written emotional disclosure. No studies reported no effect of the intervention and, where it was reported, the active treatment was found to be better than WL or TAU. Evidence for long term gains is limited. The studies have adopted a range of methodologies. Weaker methodologies are considered to be those that may have a number of confounding factors which could influence the results and have not been controlled for. Case studies are considered to have lots of confounding variables. RCTs are considered to be the strongest methodology as they have controlled for a number of biases in their design such as a control group, randomising participants and making sure that assessors are blind so they can't be influenced the condition they are in and using statistical designs which can account for missing data and biases that may result from people dropping out of treatment. Although the research demonstrates this hierarchy, the review was conducted because PTSD interventions had not been tested in people with psychosis, however some of the interventions have been tested using RCTs in other populations. Therefore, results from weaker studies can be considered in line with high

quality evidence from other populations. Overall, the methodological quality of the studies and therefore the validity of the results are variable across the interventions so it is difficult to draw any definitive conclusions about which interventions may be more effective.

A third of the studies reported some outcomes on the symptoms of psychosis, however this was based on small numbers of participants in the sample and measured using broader psychiatric questionnaires. Two thirds of the studies reported improvements in symptoms of psychosis and no studies identified that the interventions made people worse. Although this provides some initial promising findings, assessing comorbid symptoms of psychosis have not been research priorities and therefore have not been assessed using specific measures and thus the findings do not currently provide any additional evidence for the links between trauma and psychosis and the potential mechanisms.

Limitations

One of the limitations of this review is the methodological quality of the studies. Only two studies (van der Berg et al., 2015; Mueser et al., 2009) adopted the gold standard RCT and have addressed several factors which could bias the results. The remaining 16 studies are a combination of single case studies or pilot studies where there are limited controls. In some studies where there are control conditions, comparisons have not been drawn, so there are several possible confounding factors. If studies are evaluating a previously rigorously tested approach (e.g. a protocol for TF-CBT or EMDR) it would not be expected that a full RCT would be warranted just to test the intervention in a new population. However, if a new intervention is being tested (e.g. CRI, CR programme) then rigorous testing, whereby there are sufficient controls for potential bias, would be expected. All the studies reviewed suffered from small sample sizes such that effect sizes could not be detected.

All the studies have presented positive findings, particularly noted in the single case studies. This could represent true findings that all interventions are successful, however it could be a reporting bias that unsuccessful outcomes have not been published.. In addition to this, some studies only reported the findings on a proportion of the sample who completed follow-up assessments. No analyses were conducted to compare those who did and did not complete the assessments to see if there were any notable differences which may account for their non-attendance. This review did not attempt to include unpublished findings which may highlight a potential reporting bias but it also may have excluded important findings that contribute to this debate.

There is also a limitation with the search criteria employed. A broad definition of trauma was included here to incorporate traumatic experiences that would meet the DSM-5 criteria for PTSD but it also included experiences that were traumatic in nature to an individual but not meeting PTSD criteria (e.g. experience of psychosis). Despite the broad definition of trauma, symptoms were assessed using assessments aimed to assess symptoms of PTSD which may not have been validated for these broader experiences. Also the search term used to identify articles was PTSD, thus the search itself may have excluded papers that looked at a broader definition of trauma. A broader search could have reflected more the nature of traumatic experiences that people with psychosis may have experienced.

The final limitation is specific to the cognitive therapies. In the NICE guidelines (2005) for PTSD they recommended trauma-focused CBT as one of the interventions but do not specify beyond this. CBT now encompasses a wide range of techniques and interventions and this is reflected in the studies reported in this review. It is therefore difficult to compare the cognitive therapies as they are all slightly different. Researchers need to be clearer about the protocols or approaches they are using to enable better comparisons.

Clinical implications

These results add to the growing perception in the field that PTSD is commonly comorbid with psychosis. How to treat such individuals is less clear. The NICE guidelines (2014) recommend treatments for PTSD but as this review highlights few studies have actually tested these for people with psychosis. TF-CBT has only been reviewed in case study designs, thus not rigorously tested, and EMDR has only found promising outcomes in a small number of studies. A number of other interventions, currently outside of the NICE (2005) guidelines for PTSD, have also been investigated but need further testing. The review does support that the 8-12 sessions recommended by NICE (2005) is likely to be effective. This review clearly highlights that more work needs to be done to identify whether NICE recommended treatments, or alternative interventions, are effective and under what conditions.

Future research

The key message is that interventions for PTSD in people with psychosis now need to be evaluated using methodologies which can be subjected to quality checks in future reviews, i.e. methodologies which control for potential biases that will be assessed such as

participant selection, measurement of outcomes, missing data, group allocation and reporting outcomes. Particular factors that have been identified in this review include recruiting larger sample sizes to detect good effect sizes; reporting adherence to protocols to increase replicability; and, either comparing the intervention to TAU or to another active treatment which is known to be effective. Future research needs to clearly specify the traumas that people have experienced and the level of the symptoms they experience to find out more about the conditions under which the interventions are successful and whether the current guidelines are applicable for people with psychosis. There is now consistent evidence that there is a strong relationship between traumatic experiences and the development of psychosis and more recent research has explored the potential mechanisms of this relationship. Despite this evidence, researchers have not looked at psychosis as an important outcome and thus the impact of the intervention on both diagnoses is unknown and does not provide us with any additional evidence for the potential mechanisms. Future work needs to address this.

Future work also needs to look in more detail at the interventions that are being delivered. The NICE (2005) guidelines for PTSD recommended that TF-CBT or EMDR can be delivered in 8-12 sessions with additional sessions for those who have experienced multiple traumas, traumatic bereavement, are experiencing chronic disability as a result of the trauma or have comorbid psychopathology. It would be beneficial for future research to look in more detail at how therapy is delivered for this population and whether or not interventions can follow these guidelines or whether adaptations need to be made. For example, how many sessions are needed? Moderating factors could also be explored thinking about whether outcomes of therapy are influenced by the type of trauma someone has experienced (e.g. single vs. multiple; interpersonal vs. non-interpersonal; childhood vs. adult) and also what the active components of the interventions are. The research explored here has not focused on these factors but if future research is to do this it could also help to add further evidence for the potential mechanisms between trauma and psychosis.

Finally, the NICE (2005; 2014) guidance have made clear recommendations for treating PTSD in people with psychosis, while this is really helpful in raising the profile of this important need, further work is needed as a matter of urgency to test approaches in detail. TF-CBT needs to be more clearly outlined for clinicians to be able to follow so that clinicians can report whether they are evaluating a currently evaluated intervention or a new adaptation of it and thus determine if these recommendations are appropriate.

Conclusions

This review aimed to investigate the effectiveness of trauma-focused therapies for treating PTSD in people with psychosis. The review has considered a number of different interventions which present promising outcomes at this early stage. However, considerably more work needs to be done at improving the methodological quality of the studies and looking at additional factors which may contribute, before any appropriate conclusions can be drawn.

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Name: Clare Dixon

Contact Details: c.dixon@bath.ac.uk

Service Improvement Project:

Supporting the supporters: Evaluation of a consultation service for children in care

Word count: 4646

(excluding the abstract, tables, figures, and references)

Date: May 2016

Internal supervisors: Prof. Paul Salkovskis

Dr. Cathy Randle-Phillips

External Supervisor: Liz Stott

Target Journal: Adoption and Fostering

Abstract

Children in care are at increased risk of developing mental health problems potentially due to the increased experience and impact of social and environmental risk factors in their early life. However, there are difficulties accessing mental health services that understand their specific needs. Mental health consultations have been recommended to increase access to mental health services for those working with children in care. A child and adolescent mental health service has been providing a consultation service to social workers for over 4 years. **Clare Dixon** reports the results of an audit of 83 consultations and a survey completed by 34 social workers, to gather their views about the consultations. The results showed that consultations were utilised by several social work teams, were requested for a variety of reasons and resulted in a range of outcomes. The social workers were positive about their experiences of the consultations and reported that it gave them a better understanding of the difficulties they were experiencing and how to manage them. The results highlighted difficulties with the internal administration processes, practicalities and social workers' understanding of what the consultations provide. Recommendations were provided highlighting areas of good practice and ways to improve the consultations that are provided to the social workers for children in care.

Keywords: consultations, social work, children in care, mental health

Introduction

The idea of consultations in mental health services originated with Gerald Caplan in the 1950s when he was asked to provide a service to 16,000 clients (Caplan, Caplan, & Erchul, 1995). He came up with consultations as a way to meet the high level of need with limited resources. The consultation needed to be brief but to be most effective it also needed to promote learning that could be applied to other clients. Caplan (1995) identified four types of consultation: client-centred case consultation, program-centred administrative consultation, consultee-centred case consultation and consultee-centred administrative consultation. Client-centred and consultee-centred case consultation will be the primary focus in this paper. The aim of consultation, in this model, is to allow those working day-to-day with problems to access more specialist expertise and apply it to their clients.

Since the 1950s the consultation approach has been utilised and developed in a range of mental health scenarios. The consultee, often someone without mental health training, would seek help for a work related problem, often the management or treatment of one or more clients, for which the consultant has specialised mental health expertise. The focus is on the collaborative relationship to facilitate problem solving or increased understanding to enable the consultee to incorporate a mental health perspective in their work (Centre for Mental Health Services (2000). Alkon, Ramler and MacLennan (2003) also found that consultations can improve the consultee's self-efficacy and thus their confidence in their ability to apply a mental-health perspective to their work.

Children in Care

For the purpose of the present paper, Children in Care refers to all children who are, or have been, looked after by the local authority (subject to Children's Act 1989, including children adopted from local authority care and Special Guardianships). At the end of March 2015, 69,540 children were looked after by the local authority and 5330 children were adopted. Sixty-one percent of children entered the care system due to abuse or neglect in their birth family; many could be expected to experience mental health problems (Department of Education, 2015).

Children in care may enter the care system with poorer physical health than their peers, potentially due to early experiences of abuse and neglect (Local Government Association, 2012; McAuley & Davis, 2009); they demonstrate additional difficulties (e.g. social issues, educational difficulties: McAuley & Davis, 2009); and are up to five times more likely to develop a diagnosable mental health condition (Local Government Association, 2012; McAuley & Davis, 2009). In a national survey of 1039 looked after children, Meltzer,

Gatward, Corbin, Goodman and Ford (2003) found the prevalence of mental health disorders in this sample was 45% compared to a prevalence rate of 8-11% in non-looked after children. Rates of emotional disorders in looked-after-children were estimated at 12% with 2.1% received a diagnosis of Post-traumatic Stress Disorder. Following on from these survey reports, the Department of Education requires every carer of a looked after child to complete the Strengths and Difficulties Questionnaire annually. The results of this can help to screen for any behavioural or psychological difficulties and implement additional support if concerns are highlighted (Department of Education & Department of Health, 2015).

Callaghan, Young, Richards and Vostanis (2003) conducted focus groups with social workers and foster carers to help inform the development of a specialist mental health service for children in care**.** In common with other studies, the participants identified difficulties accessing mental health services for children but particularly when placements become unstable (Callaghan et al., 2003; Sargent & O'Brien, 2004). Beck (2006) found that placement instability was associated with increased mental health difficulties, suggesting the needs of children are greatest at these times. Participants said that working in partnership with mental health services was really important, but that the mental health services needed to understand the specific needs and circumstances of the children. They felt that an earlier response, when the child is first in placement or in the planning stages, could be beneficial. Sargent and O'Brien (2004) also stated that carers noted the young people can be reluctant to attend mental health services, another barrier to young people receiving a much needed service.

Consultation and Children in Care

Participants in the Callaghan et al., (2003) study suggested that a consultation model could help to improve partnership working and communication between services and improve access to mental health services for children in care. This suggestion is supported by recent recommendations in the National Institute for Health and Care Excellence (NICE, 2010, 2013) for Looked after Children and Young People. The guidelines state that multi-agency teams should have access to a consultancy service to support collaboration between teams and complex case work. They suggest that this service should be designed and delivered by particular experts, one of which could be child and adolescent mental health services.

Dent and Golding (2006) have described a consultation approach specifically for thinking about children in care. The consultation provides a reflective space for the network surrounding a child (e.g. social workers, carers, teachers, etc.) to meet and discuss the

different perspectives on the difficulties they are experiencing. The role of the consultant is to recognise everyone's expertise in the consultation, bring their expertise together into a shared, psychological understanding, which helps to facilitate a discussion of the issues brought to the consultation.

Dent and Golding (2006) suggest a number of psychological models that can be drawn on to conduct a consultation. Similar to Caplan (1995) they suggest that the consultation can either focus on the content or the process. A focus on content would be when a consultee is seeking help for a specific difficulty with a client for which they need the consultant's specialist expertise. A focus on process would be when a consultee needs the consultant to facilitate a collaborative discussion between the network to help find a solution or plan for a particular difficulty.

There is limited information about the outcomes of consultation services for children in care and different approaches to consultation have often been adopted. Where it has been evaluated, promising outcomes have been reported. Golding (2004) found a high level of satisfaction in foster carers when adopting a consultee-centred consultation model. Using the idea of Andersen's (1987) reflecting team model, Swann and York (2011) found that consultations facilitated better communication, brought together the different perspectives, promoted a shared understanding between all professionals, supported carers, aided care planning and decision making and improved the confidence of the social workers in managing their cases. Using a longer, 6-session consultation model, Hibbert and Frankl (2011) found four main themes in their responses: ease of access to mental health services, enhanced foster carers knowledge, emotional support to foster carers and support for social workers.

Service Context

Approximately four years ago, the Gloucestershire Child and Adolescent Mental Health Service (CYPS) was commissioned to provide a service for children in care in the local authority. As part of this commissioning, the lead for fostering an adoption in the local authority, requested for a consultation service to be offered to social workers in fostering and adoption teams as she had experiences of this in a previous role. It was not clear what was wanted from the social workers or what might be needed at this time. The commissioning specification states that the consultations aimed to help social workers feel confident in identifying early indicators of difficulty, know how to promote positive emotional resilience in families and deliver appropriate interventions as well as supporting

placement stability. Over the last year there have been changes to capacity of the consultation service (*Table 1*).

Approximately 104 consultation appointments have been made available between March 2015 and March 2016. At current capacity, about 150 consultations will be offered each year.

The consultation appointments are coordinated by an administrator in the local authority. Social workers who wish to book a consultation complete a booking form with details about the child, their current and birth carers and their current legal status and the reason for requesting a consultation. Once this form is received they are booked into the next available slot. It is the social worker's responsibility to invite anybody in the network they wish to attend. The child must not be invited. Previously, the consultations were conducted at a local authority building but due to various difficulties they were moved and are now completed at the CYPS base. Once the consultations have been booked, the administrator records this on a spreadsheet. This spreadsheet is sent weekly to the consultants, along with the booking form. The child being discussed is then activated on the mental health records database, so that they have an active referral, and the booking form is uploaded.

Table 1: Number of consultations offered per month from March 2015 to March 2016.

	Number of consultations offered per month												
Clinician	March 2015	April	May	June	July	August	September	October	November	December	January 2016	February	March
Clinical Psychologist	6	6	6	6	6	6	4	4	4	4	4	4	4
Psychotherapist - 1	6	*											
Psychotherapist - 2							+4	4	4	4	4	4	4
Psychotherapist - 3											+2	2	2
TOTAL	12	6	6	6	6	6	8	8	8	8	10	10	10

**Psychotherapist 1 left the team*
+Psychotherapist 2/3 joined the team
NB. All consultations are 1.5 hours long

Following the consultation the consultant writes a summary report including any recommendations or decisions made. It remains the social workers responsibility to follow-up any recommendations or implement decisions. This report is sent out to all relevant parties, a copy is uploaded onto the mental health records system and the case is discharged on the records system. It is not currently possible to record the consultation as an appointment on the records system.

Consultations are well used and often booked up in advance. Anecdotal reports suggest that they are extremely valuable. However, they have never been evaluated and thus it is unknown who is (and isn't) using them, for what purpose, what the outcomes are and whether any improvements can be made. In a resource limited climate, it is important that services know that what they are providing is acceptable and effective in order to feed back to those that commission the service and thus they should be evaluated routinely.

This project aimed to evaluate the consultation service provided by the Gloucestershire CYPS children in care team:

- Find out what the consultation service provides;
- Explore social workers views about the consultation service;
- Provide recommendations about potential improvements to be made to the consultation service.

Methods

The study was carried out in two parts.

1. An audit was carried out of all consultations in the last 12 months.
2. Questionnaires were given to all social workers in Gloucestershire County Council (GCC) who are eligible for consultations.

Audit

The audit was conducted on all consultations completed between March 2015 and March 2016. The CYPS Children in Care team currently record their notes on an electronic record system, however, this is not able to record consultation appointments and thus data cannot easily be extracted. Therefore, the booking spreadsheet for the past 12-months was obtained and each child was searched manually on the records system to gather the information. Audit information was recorded on a separate database. Information was gathered on the name and team of the social worker, the names, ages, genders and ethnicities of the children, consultation attendees, reason for referral, and outcome of the consultation. Due to current issues recording the consultations it was also identified where the information was found on the records system, whether the children had a current open referral to CYPS and/or whether they had been referred to CYPS in the last 12 months.

Survey

The second part of the study was to evaluate the consultations as viewed by those who used them, the social workers.

The survey was developed with the clinicians who ran the consultations, the CYPS Operational Delivery Manager and the Service Manager for Fostering and Adoption in GCC. The questionnaire aimed to evaluate a range of aspects of the consultations. Firstly, identifying those who have used the consultations and where they heard about them. If they hadn't heard about them or used them we gathered brief information about the reasons why. We then asked a range of questions about the experience of booking and organising the consultation, the experience of attending the consultation itself, the experiences after the consultation in terms of reports received and impact on practice. Finally, the questionnaire asked participants' views about how we could evaluate the consultations routinely. The questionnaire comprised of a range of closed and open ended questions (see Appendix 2).

Procedure

The Fostering and Adoption Service Manager sent out an email with the questionnaire to all team managers in GCC involved in fostering and adoption, asking them to cascade the email to their teams. A separate email was also sent out by the administrator who coordinates the consultations to all social workers who had ever booked a consultation. Participants were initially given a period of 6 weeks to return their responses during which reminder emails were sent. Unfortunately, only four responses were received at the end of this time period so the deadline was extended for a further three weeks. Additional reminder emails were sent to all team managers with the option for the author to attend the team meeting and/or send paper copies of the questionnaire. During this time the author attended three team meetings and delivered paper copies of the questionnaires to a further four teams.

It is important to highlight the difficulties in obtaining the contact details for all the relevant Fostering and Adoption teams. There has been a recent re-structure and therefore the names and location of all the teams and the number of social workers employed in each team is not clear and was not available at a central point.

Ethics

The study was approved by the University of Bath Department of Psychology ethics committee (ref. 16-019).

Results

Audit

The majority of the information was found in the documents section where the booking form and the consultation summary were uploaded. The referral screening could also be checked to see if there were any overlapping referrals. Twenty-three percent of the consultations did not have a booking form uploaded and 24% did not have a consultation summary uploaded. For 12% of the consultations, some information had to be sourced from the progress notes.

Eighty-three consultations were completed over the 12 month period (79% of the 105 that are estimated to have been offered). Consultations were booked by 48 different social workers from 13 different teams (*Table 2*). During these consultations 107 children were discussed (there is no information about one as it was not recorded on the records system). They ranged in age from 1 to 17 years with a mean age of 7.91 for the sample (SD = 3.98). There were 48 boys (45.3%) and 58 girls (54.7%) discussed. 89.2% were white British, 3.6% were white mixed, 1.2% was Asian and 1.2% was Polish. 3.6% were unknown and 1.2 % was missing. The majority of the children discussed were placed with a Special Guardian, on section 20 or on an interim care order. Lots of different terms were used making it unclear exactly what the legal status of the child was.

Table 2: Number of consultations requested by each team

Team	**N (%)**
11+ team	2 (2.41)
Adoption Support Team	3 (3.61)
Children and Families Team	4 (4.82)
Children in Care Team	3 (3.61)
FDAC	1 (1.20)
FFAST	1 (1.20)
Fostering Support Team	17 (20.48)
Friends and Families Team	7 (8.43)
Permanence Team	10 (12.05)
Under 11 Permanency Team	1 (1.20)
Referral and Assessment Team	1 (1.20)
TAC team	1 (1.20)
Family Support Worker (unknown from which team)	1 (1.20)
Unknown	14 (16.87)

The number of people who attended a consultation ranged from 1 to 14 (excluding the clinicians leading the consultation). Fourteen was an outlier therefore excluded from the mean score. Without that the number of attendees range from 1 to 6 with a mean of 2.93 (SD = 1.39).

60.24% of the consultations were discussing individual children and 28.92% were discussing multiple children/sibling groups. The focus of 3.61% of the consultations was on carers and 2.41% (n=2) on birth children of carers. This decision was based on subjective judgement of the booking forms and consultation summaries and it was not always clear cut between discussing the needs of the children and the needs of the carers.

Of the 83 consultations, 63.85% discussed children who had not had a referral into any CYPS team in the last 12 months. 15.67% of the consultations discussed children who had been discussed in a previous consultation in the last 12 months and 12.05% discussed children who had had a referral into CYPS.

Only 8.43% of the consultations had children who had an active referral within CYPS at the time of the consultation. This ranged from being open to Level 3, a level 3 parenting programme, children in care or the learning disabilities team.

There were a number of reasons for the requests for a consultation extracted from information on the booking forms. For some there were multiple reasons, therefore only frequencies are presented and not percentages (*Table 3)*.

Table 3: Reasons for requesting a consultation

Reason for consultation request	**N**
Concerns about birth children	2
Carers wellbeing / Impact on carers	3
Behavioural difficulties	39
Strategies/Advice	23
Greater understanding of child	16
Concerns about placement stability	4
Concerns about child's mental health/emotional wellbeing	8
Transition / Adoption	11
Not clear	1
Concerns about contact	3
Need for ongoing therapeutic input	1

The outcome of the consultations varied, and often multiple outcomes were given. As some consultations had multiple outcomes only the frequencies are presented *(Table 4)*.

Table 4: Outcomes of the consultations

Outcome	**N**
Adoption Support Fund	3
Advice	18
Advice for schools / Involvement of virtual schools	2
Further consultation	10
External/Independent Assessment	5
Referral to CYPS Level 3	9 (Neuro = 1; Harmful Sexualised Behaviour Team = 2; Parenting = 3)
Nurturing Attachments Group	7
Paediatrics	7
Referral to CYPS Children in Care	7
Review of Contact	4

Survey

Demographics: 34 social workers, from 9 different teams (*Figure* 1) responded to the survey. They had worked as a social worker in GCC for a range of 0 to 30 years (n=32, mean = 8.13, SD = 7.99).

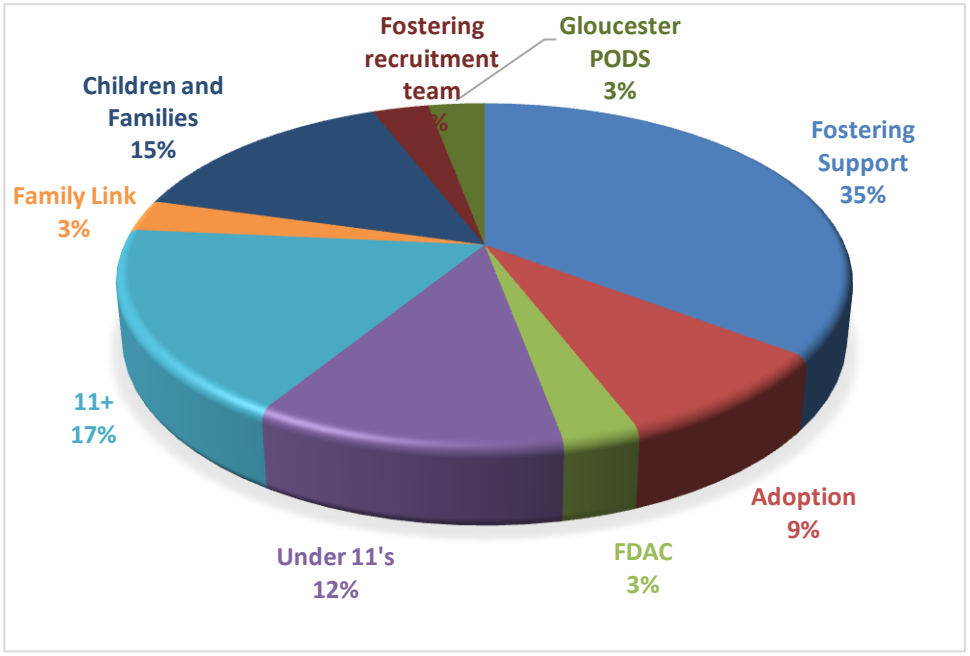

Figure 1: Teams that responded to the survey

32 responses were given to the number of consultations booked (*Figure 2*). Three people reported they had never booked a consultation. The remaining results are based on 29 responses.

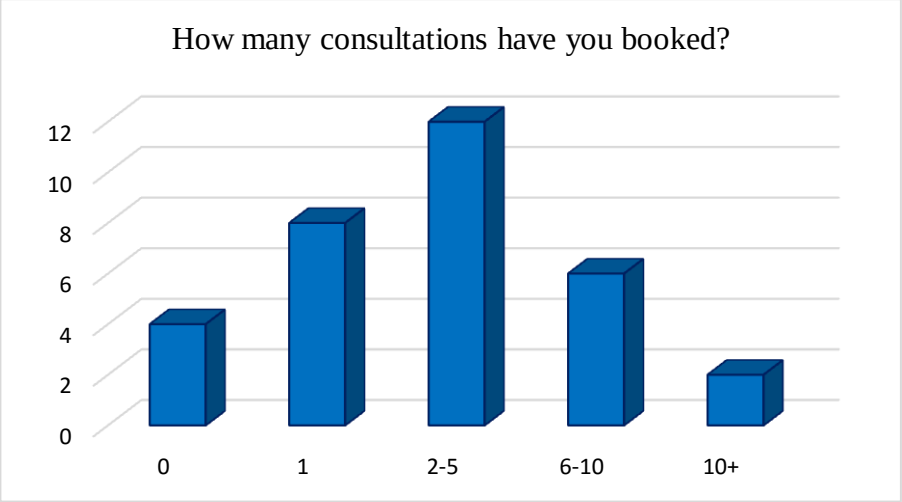

Figure 2: Bar chart showing how many consultations participants had booked

People had heard of consultations through a range of sources: through colleagues or team managers (n=8), visit from a CYPS worker (n=5), team meetings (n=4), team emails (n=4), Supervision (n=2), booked by another team (n=1), general knowledge in the team (n=1), result of SDQ (n=1).

Booking a consultation. People were asked on a 5 point likert-scale how easy they found the process of booking a consultation, how easy it was to set it up and the availability of the slots. Lower scores represent a more positive response. Results were as follows: Participants found the process of booking a consultation easy (mean = 2.04, SD = 1.00, *Figure 3*).

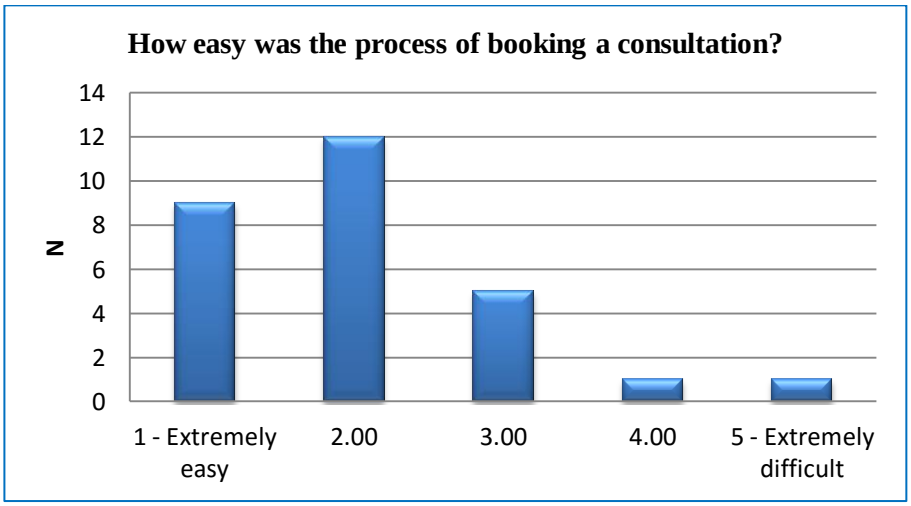

Figure 3: Bar chart displaying frequencies "how easy participants found it to book a consultation"

The majority of people found it easy to set up (mean = 2.33, SD = .96, *Figure 4*).

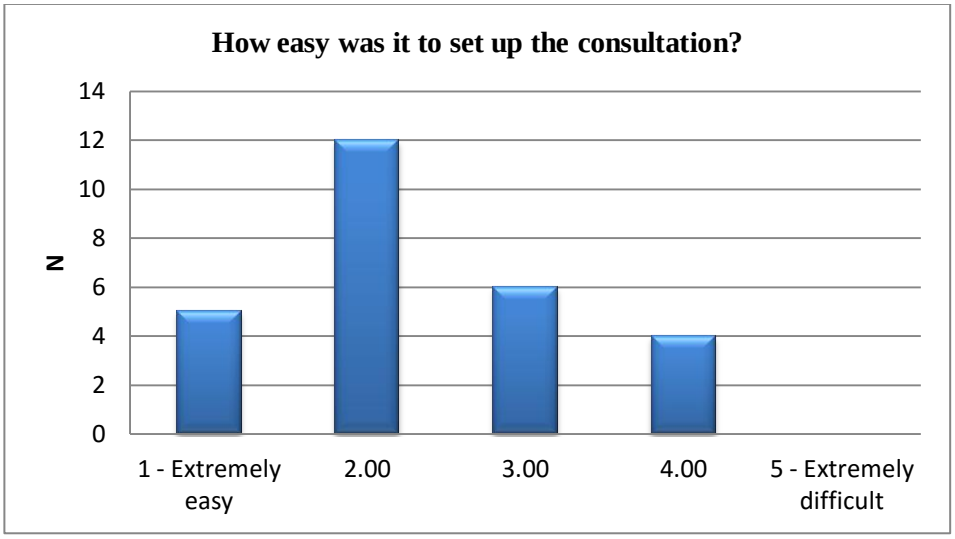

Figure 4: Bar chart displaying frequencies of how easy participants found it to set up a consultation

There was a variable response to the availability of appointments with some people finding it good and some people poor (mean = 2.96, SD = 1.16, *Figure 5*).

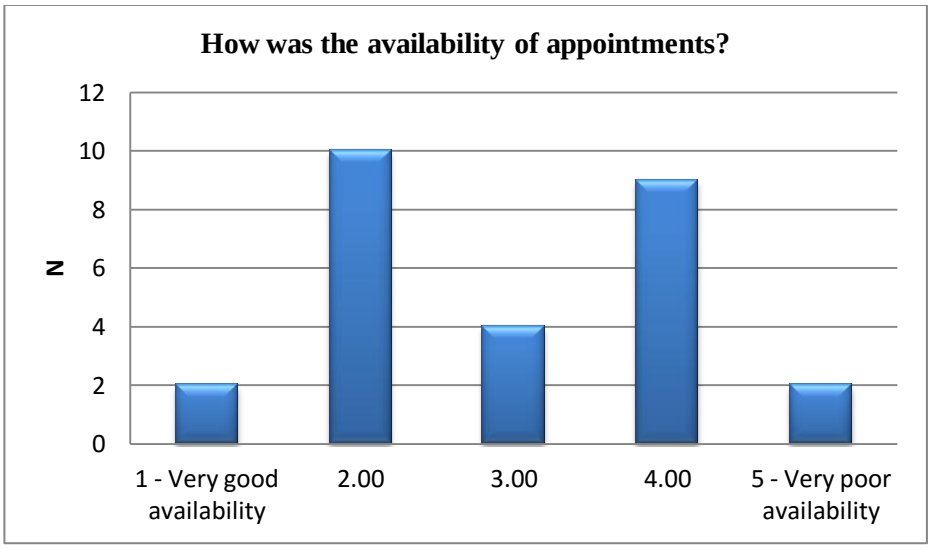

Figure 5: Bar chart displaying frequencies of how participants found the availability of appointments

People booked consultations for a number of different reasons. Some people identified several reasons for why they might have booked consultations so only the frequencies are presented (*Table 5*).

Table 5: Reasons for booking a consultation

Reason	**N**
About the Child	*14*
Consider the child's emotional/mental health needs	4
Consider the child's behavioural difficulties (e.g. challenging behaviour, attachment difficulties, sexualised behaviour)	8
Consider options for additional support/therapeutic input	2
Support for the child	1
Result of SDQs	2
Placement difficulties	4
Transitions (e.g. moving placements, adoption)	1
Not specified	1
About the Carer	*14*
Support for the carers (e.g. personal circumstances, personal impact)	3
Understanding the child's behaviours and needs	5
Receiving guidance/advice/strategies for how to manage the children's needs	3
Support around managing the child	2
Reassurance for the carer about how they are managing the needs of the child	2
To share their experiences of the child	1
Transition	1
Not specified	1
About the Professionals	*6*
Gain better understanding of the child's behaviours/needs	2
Discuss long-term plans/needs of the child (e.g. adoption, transitions)	4
Unclear	1
Missing	5

Fifty-percent said nothing put them off booking a consultation. The main reasons people identified were waiting times (n=4), difficulty fitting it in and getting everyone to attend (n=5), location (n=3) and the forms taking too long to complete (n=2).

The consultation itself: The main section of the questionnaire asked participants about their views about different aspects of the actual consultation.

Expectations: Eighty-four-percent of participants said that the experience of the consultation matched their expectations, 16% were not sure and no participants said it didn't. In the qualitative comments, responses suggested that the consultations enabled participants to gain a deeper understanding, get advice and guidance on the issues and they helped inform care plans. Some people commented that it can take a lot of time to describe information and if not everyone is there then a representative view is not presented.

Consultation process: Participants rated items about the process of a consultation on a 5-point likert scale. Lower scores represent a more positive answer.
Most participants said that the consultations did focus on the issues they wanted to discuss: Mean = 1.85 (SD = 1.01). (*Figure 6).*

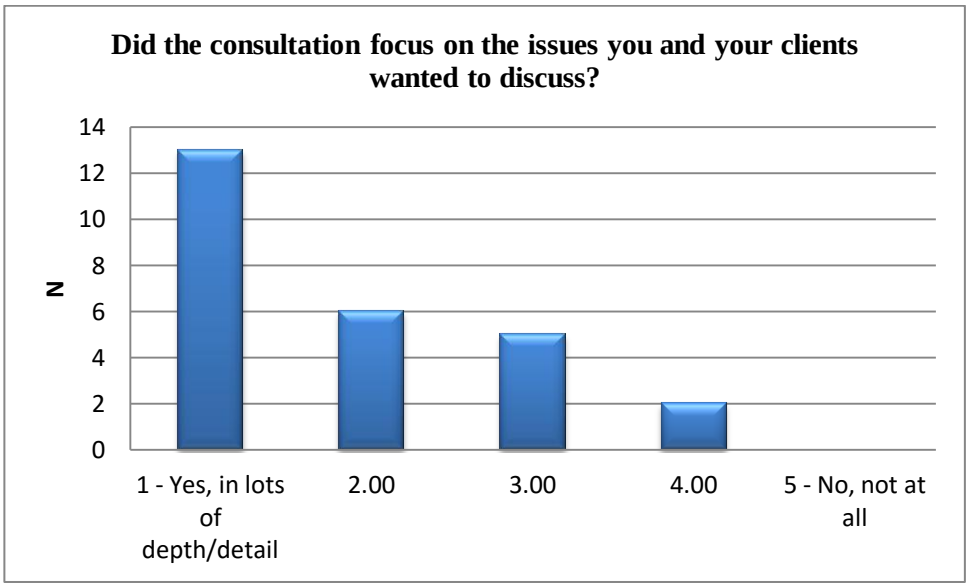

Figure 6: Bar chart to show whether participants felt the consultation focused on the issues they wanted to discuss

All participants felt welcomed at the consultations: Mean = 1.42 (SD = .58) (*Figure 7).*
The majority of participants felt heard and listened to: Mean = 1.48 (SD = .92). (*Figure 8).*
The majority of participants who responded felt that they had the process explained to them (76.92%) and they felt they understood the process of the consultation (57.69%).
73.08% felt that the length of the consultation was about right, 23.08% felt it was too short but no one thought it was too long.

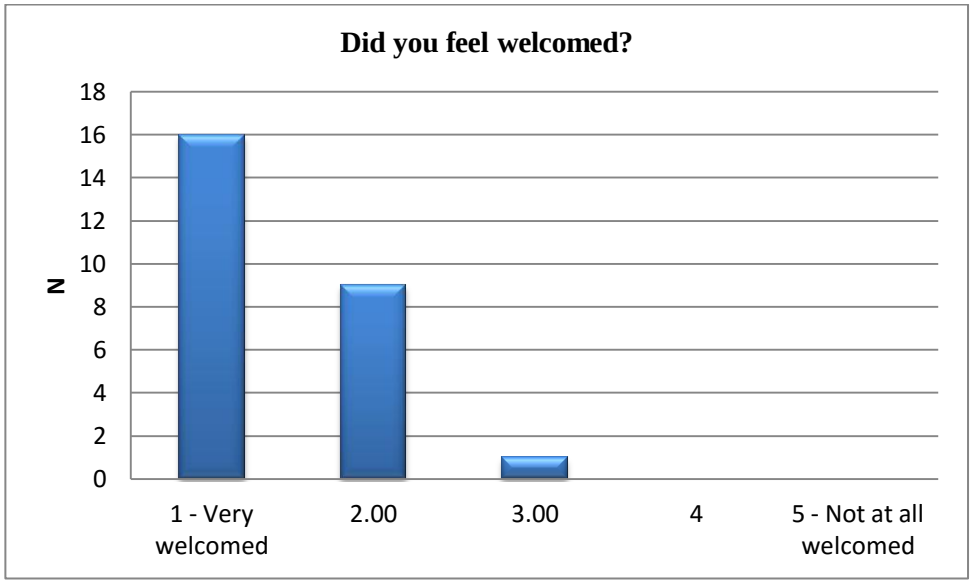

Figure 7: Bar chart to show whether participants felt welcomed at the consultation

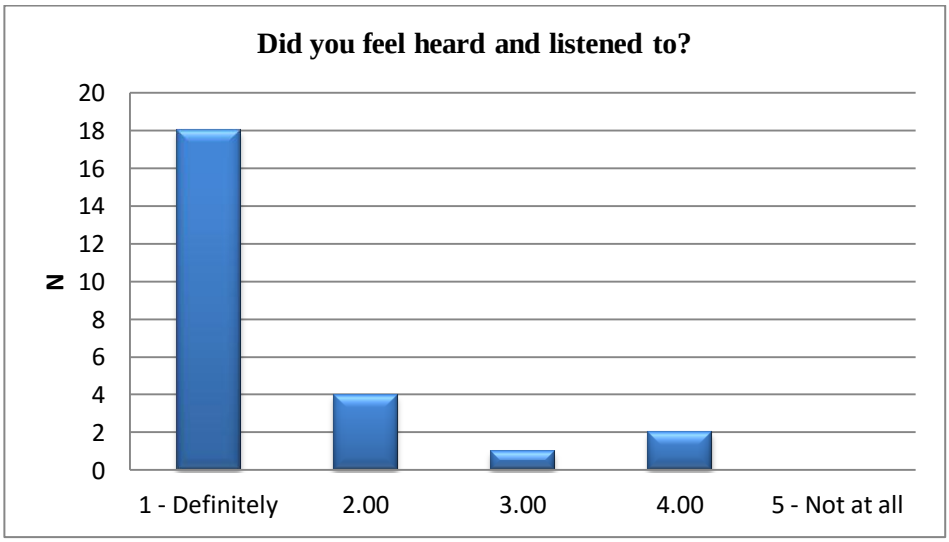

Figure 8: Bar chart to show whether participants felt listened to at the consultation

Outcomes: 25 participants reported the recommended outcomes of the consultation, with 35% reporting that there were multiple outcomes therefore only the frequencies are presented (*Table 6*).

Table 6: Survey - Outcome of consultations

Outcome	**N**
Further consultation	12
Referral to CYPS Children in Care	7
Referral to CYPS Level 3	1
Nurturing Attachments Group	3
External/Independent Assessment	2
Review of contact	2
Involvement of virtual school	1
Advice	3
Teens in crisis	1
Referred for counselling	1
None	3

Only 22 people responded to the question asking how helpful the outcomes were. Thirteen said the outcomes were definitely helpful and 8 said they were a bit helpful. Only one person said the outcomes weren't helpful. The sample was split between the 13 who said it was helpful and the 9 who said it wasn't or only a bit to see if the outcomes of their consultations were different. The two main outcomes in both groups were further CYPS consultation or referral to Children in Care (*Table 7*).

Table 7: Table to compare the outcomes of a consultation between those who found it helpful and those who found it a bit or not helpful

Outcome	**Outcomes were helpful N (%)**	**Outcomes were a bit/not helpful N (%)**
Further CYPS consultation	7 (35)	3 (27.7)
Referral into CYPS Children in Care	5 (25)	2 (18.2)
Nurturing Attachments Group	1 (5)	1 (9.1)
Advice	2 (10)	1 (9.1)
Nothing	1 (5)	2 (18.2)
Virtual School	1 (5)	-
Referral to CYPS Level 3	1 (5)	-
Review of Contact	1 (5)	-
Young person referred for counselling	1 (5)	-
External/Independent Assessment	-	1 (9.1)
Teens in Crisis	-	1 (9.1)
Multiple Outcomes	5 (38.5)	2 (22.2)

Participants were specifically asked how the outcomes had informed or influenced their professional practice. Based on 24 responses a number of people reported several ways it had informed their practice, therefore only frequencies are presented (*Table 8*).

Table 8: How outcomes of consultations informed or influenced professional practice

How consultation informed practice	**n**
It didn't	5
Improved their understanding of the child and/or problem	15
Decreased their anxiety or stuckness about a situation	6
Increased their confidence in their existing skills and/or ability to manage the situation	7
Helped with specific aspects of a child's care or planning	11
Improved the sharing of information about the problem between agencies	5
Helped to improve the carers understanding even though they were already doing the right thing	1

Based on 26 responses, 20 said that the consultation had provided them with new information (10 said definitely and 10 said a bit). Six said it didn't provide them with new information.

After a consultation: After the consultation, participants are supposed to be sent a summary report. Thirty-six percent said they did not receive a report. Based on 15/16 who did receive a report, 66.67% said it accurately conveyed the information and 33.33% said it mostly did. 62.5% said it was written in a way they could understand and 37.5% said it mostly was. Similarly, 62.5% said the report was definitely helpful and 37.5% said it was a bit helpful.

Of the 24 people that responded to the questions, 100% said the consultations were a good use of professional time and they would recommend it to a colleague.

Evaluating a consultation. The survey finally asked participants about how the consultations can be evaluated ongoing. Out of 30 responses, 56.67% said that the survey should take less than 5 minutes to complete and 33.3% said it should take 5 minutes. 78.57% said that a mixture of forced choice and free options should be used. Only 3 people gave suggestions about what should be included on an evaluation form: what was the most/least helpful thing; ask about carers understanding; asking about if there were any recommendations from the consultation.

Participants who had not used consultations: There were 6 responses for those who had never booked a consultation. Three had never heard of consultations and 3 had. Of the 3 who had not heard of them, 1 of these had only been working in the team a matter of days. The reasons the remaining three had not booked one was: one felt they hadn't needed one and the remaining two were team managers who signed them off only and didn't have their own caseload.

Feedback: Over the questionnaire participants were asked to complete some open ended questions. Table 9 presents the overarching themes that have been reported throughout all the comments.

Discussion

The first aim of this project was to audit the consultations over the last year to identify what the consultations service currently provides and who to. The second aim of this project was to evaluate the consultation service by delivering a questionnaire to all local authority social workers. This project would thus help to provide an evaluation of the consultations and recommendations about potential improvements to be made.

The representation of teams in the audit and the questionnaire is similar (i.e. the most represented team was Fostering Support).

The results showed that people were positive about the experience of organising and booking a consultation. However, there was a mixed response about the adequacy of the availability of the consultation appointments. The results of the audit and the consultation show that consultations are requested for a wealth of reasons by social workers. Of note, the results showed than only two consultations were requested based on the results of the Strengths and Difficulties Questionnaire despite this being highlighted as a screening tool to implement additional psychological support where concerns are highlighted (Department of Education & Department of Health, 2015).

Participants were also very positive about their experiences of the actual consultations and how they were run. They identified a number of ways it had helped them in their practice and the range of outcomes that may result. The most frequent outcomes identified in the audit and in the survey were slightly different. Of note, it is unknown how many of the recommended outcomes (e.g. further consultation, referral to CYPS) are actually followed through.

The results suggest that for 24-36% a summary is not sent/received. Those that did receive a summary responded positively about them. It is worth noting that this number could be

higher than expected as it was not clear that all those that responded to the questionnaire were describing the consultation service specifically over other work that the team offers and in the audit some may yet to have been produced.

Participants also gave qualitative feedback in the questionnaire. It was clear from this feedback that the consultations are highly valued by the social workers in the local authority and it is very helpful in their work. However, there is some confusion over what the consultations are and how they are different from other work the teams offer and there was a strong theme that participants were not satisfied with the availability of appointments in a timely manner.

Recommendations and Feedback to the team

The main recommendations made to the team were about improving the internal processes within CYPS e.g. how the bookings are managed and recorded on the records systems and how reports are sent out. Another key recommendation was to improve the information that is available to social workers so that they know what to expect from the consultations and they know how the consultations are distinct from other areas of work that the team provides. A final key recommendation was about providing a way to evaluate the consultations routinely. Other recommendations were about reviewing the practical aspects of the consultations and the way in which they are delivered by different members of the team. Recommendations were also made about things that were really valued by the social workers and thus should not be changed.

The information in this report and the full list of recommendations were really valued by the team. They agreed with the key recommendations and highlighted ways in which they would like to take this forward (e.g. making the booking form clearer, designing a leaflet to be made available to social workers). They also discussed potential concerns about implementing the recommendations and how they might manage this as a team. The operational delivery manager said that the report will help when she meets with the commissioner to review the service specification.

For a full list of recommendations and more detailed information about the feedback meeting to the team, please see Appendix 3.

Table 9: Themes extracted from the qualitative comments to the survey

Theme	**Description**
Waiting Times/ Availability	Throughout the questionnaire participants commented on the length of time to wait for an appointment and the availability of slots and that this was not sufficient. Many commented that they were not timely to deal with significant issues such as matching panels or placement breakdown. One participant had to cancel the consultation as the placement broke down before the appointment.
Valued	Participants really valued the consultations and found them a useful and helpful resource.
Developing understanding and what to do	Several participants commented that the consultations helped to develop a greater understanding of the child's difficulties and the theoretical and practical understanding of how the child's early experiences might be impacting on them. It also helped to offer advice, guidance and strategies on how to manage this. Some participants felt the practical support wasn't always sufficient.
Confusion	It is clear across the questionnaire that there is some confusion about the consultations. A number of the open ended comments are clearly not describing the consultation process, but more other processes that the team offer (CHOICE appointment). Participants had also booked appointments through other avenues that are not available for the consultations. Some also talked about children being present which is not the case for the consultations. Other comments did state there was some confusion about the difference between a consultation and other slots and also how consultations fitted with other areas of the service e.g. getting ongoing support.
Support	A number of comments said that the consultations offered support for a number of different people including the carers, the professionals (e.g. schools, social workers) and also indirectly provided support for the young people.
Location	In the last year the consultations have moved and several people stated that the new venue was not convenient for many people and parking was an issue. However, one participant did comment that the original venue was not appropriate as they were not based there and reception was not aware of the consultation taking place or how to contact those in the meeting.

Limitations

This project has provided the CYPS Children in Care team with an evaluation of the consultation service which has not previously been done but there are limitations. Firstly, due to the difficulties with the current recording of consultations on the record management system, there was a lot of subjectivity required to interpret the findings making it difficult to replicate. It also only represents the consultations booked through the local authority administrator and it is known that there have been occasions where they have been booked directly through the consultants.

With respect to the questionnaire, it is unknown the proportion of social workers that responded relative to the number employed in the local authority, thus if it is a representative view. The context of the questionnaire is a lot of staff changes, team changes and location changes in the local authority which could impact on the responses. There a few negative responses which are either a true reflection or reflect a reporting bias. Also, the questionnaire asks about their overall experiences of consultations rather than a specific experience so it could be difficult to capture if they have mixed views. Few responses were obtained from those who hadn't booked consultations to explore the reasons for this.

Future work could explore the views of others in the network who attend the consultations to evaluate whether it meets the needs of the systems around the children. It could also evaluate the consultations with improved and more objective measures. Future work could improve the use of consultations as a result of the annual completion of the Strengths and Difficulties Questionnaire.

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Appendix 2 – The questionnaire
CYPS Children in Care Consultation Service Questionnaire

Foundation Trust For Gloucestershire NHS

Children & Young People Service
Evergreen House
Charlton Lane
Cheltenham
Gloucestershire
GL53 9DZ

Tel: 01242 634 050
Fax: 01242 634 409

CYPS Children in Care Consultation Service Questionnaire

Thank you for your interest in completing this questionnaire. The information from this questionnaire is being collected for the CYPS Children in Care Team as part a of service project completed by Clare Dixon, a final year Trainee Clinical Psychologist from the University of Bath.
The aim of this questionnaire is to find out more about the CYPS Consultations that are offered by Liz Stott, David Hinchliffe and Stephanie Jones from the CYP children in care team. This questionnaire is specifically asking about these consultations, which you would book through Julie Hall, and not a full referral into CYPS Children in Care Team. We want to seek the views of the social workers who use the consultations in order to evaluate the current consultation service and identify any improvements we can make to the service.

Before completing, please make sure you have read the attached information sheet and signed the consent form. This is required as part of a student project. However, your responses will be kept separate from the consent form so your responses will remain anonymous.

Please return questionnaires and consent forms by email to c.dixon4@nhs.net or post them to Clare Dixon, Evergreen House, Charlton Lane, Cheltenham, GL53 9DZ. Please return all responses by Monday 4th April 2016.

If you are completing the questionnaire electronically please **bold** the answer(s) you wish to select.

If you are completing the form by hand, please circle your answers.

1. Which team are you from?

Fostering Support	*Children in Care*	*Adoption*
Friends and Family	*FDAC*	*Under 11's*
11+ team	*Other*.....	

2. How long have you been working as a social worker in GCC? .....

3. Have you ever booked a consultation with CYPS Children in Care?

Never *1* *2-5* *6-10* *10+*

If you haven't ever booked a consultation:

Have you heard about consultations before? *Yes* *No*

Where did you hear about the consultations?.....

Why haven't you booked one?

Not heard of them	*Didn't need one*	*Took to triage*
Didn't think it would be helpful	*Other*.....	

If you haven't ever booked a consultation, please now skip to question 31.

4. How did you hear about the consultations?

5. How easy was the process of booking a consultation? *Extremely easy 1---2---3---4---5 Extremely difficult*

6. How easy was it to set up the consultation (i.e. getting people to attend at the given time)?

Extremely easy 1---2---3---4---5 Extremely difficult

7. How was the availability of slots? *Very good availability 1---2---3---4---5 Very poor availability*

8. What are the different reasons you have requested a consultation for in the last year?

9. Is there anything that has ever put you off booking a consultation?

10. Any other comments about booking a consultation?

11. Did your experience of the consultation fit with your expectations of what it would be like?

Yes *No* *Not sure*

Please explain your answer

12. Did the consultation, focus on the issues you and your clients wanted to address?

Yes, in lots of depth/detail 1---2---3---4---5 No, not at all

13. Did you feel welcomed? *Very welcomed 1---2---3---4---5 Not at all welcomed*

14. Did you feel heard and listened to? *Definitely 1---2---3---4---5 Not at all*

15. Did they explain the process to you? *Yes* *No* *A little bit*

16. Do you feel you understood the process of the consultation? *Yes* *Mostly* *No*

17. Was there anything in particular about the process that you didn't understand?

18. How was the length of the consultation? *Too long* *About right* *Too short*

19. Any other comments about the consultations itself?

20. What were you hoping for from the consultation?

21. What was the outcome or the decision of the consultation (please select all those that have applied to the ones you have attended in the last year)?

Referral into Level 3 CYPS

Referral into CYPS Children in Care

Further CYPS consultation

Nurturing Attachments Group (pilot)

External/Independent Assessment

Review of Contact

Involvement of virtual school

Referral to CYPS Learning Disabilities team

Other……

22. Were the outcomes helpful to you and your client? *Yes, definitely* *Yes, a bit* *No*

Please explain your answer:

23. How did the outcomes inform or influence your professional practice?

It didn't

Improved your understanding of the child and/or problem?

Decreased your anxiety or "stuckness" about a situation?

Increased your confidence in your existing skills and /or ability to manage the situation?

Helped with specific aspects of a child's care or planning

Improved sharing of information about the problem between agencies

Other……

24. Did the consultation provide you with new information? *Yes, definitely* *Yes, A bit* *No*

If yes, what new information were you provided with?

25. Were you sent a report or summary of the consultation? *Yes* *No*

26. Did the report accurately convey the information discussed in the consultation?

Yes *Mostly* *No*

27. Was the report written in a way that you could understand? *Yes* *Mostly* *No*

28. Was the report helpful? *Yes, definitely* *Yes, a bit* *No*

29. Do you think the consultations are a good use of professional time? *Yes* *No*

30. Would you recommend the consultations to a colleague? *Yes* *No*

31. Any other comments about the outcomes or processes after a CYPS consultation:

We are going to evaluate the outcome of the consultations routinely by asking those who attend a consultation to complete an evaluation form at the end of the consultation.

32. To be helpful, how long should a feedback form take to complete?

Less than 5 minutes *5 minutes* *6-10 minutes* *More than 10 minutes*

33. Would you prefer forced choice answers or free options to write what you want?

Forced choice *Free options* *Mixture*

34. Are there any specific things you think it would be important for us to ask?

35. Do you have any other comments about the consultations or how they could be improved?

Thank you for taking the time to complete this survey.
Please return your completed questionnaire and consent form to Clare Dixon on c.dixon4@nhs.net or post to Evergreen House, Charlton Lane, Cheltenham, GL53 9DZ.

Appendix 3: Recommendations and Feedback to the team

Recommendations

1. Improve the internal processes throughout the consultation process: recording bookings; recording consultations on the records database; ensuring that reports are sent; ensuring that all documents are uploaded on the records system.
2. To review the availability of consultations to ensure timely access to consultations for the social workers (e.g. does there need to be a process to arrange urgent consultations).
3. To review the location of the consultations to meet the different needs of all those that use them.
4. Keep the booking process the same (i.e. the same form, booking through the local authority administrator) as the response to this was positive.
5. Keep the format of the consultation the same (i.e. how reports are written, how they are run) as the response to this was positive.
6. Provide updated and clear information about the consultation process to the social workers. I suggest that it includes the aims of a consultation, who can book and how to book and what to expect from a consultation (how long, what happens afterwards, possible outcomes). It would be helpful to say how it is different to other services offered by the team. This information needs to be made available to all teams on an ongoing basis, so it is available as new people join (e.g. a leaflet).
7. Evaluate the consultations regularly so that outcomes can be fed back to the team, management, commissioners and social workers.
    a. This can be done by developing a 5-minute form with a range of responses (open and closed). Particular things to include are – recommendations/outcome of the consultation, most and least helpful thing, carers and social workers understanding of what was discussed.
    b. This can also be done through an internal audit when the systems have improved to extract data from the records system.
8. To develop better links with the local authority fostering and adoption teams. It is currently unclear how many teams there are, where they are based and how many social workers they employ. This makes it difficult to disseminate up to date information about the consultations.
9. Further work to find out if the recommended outcomes of a consultation are followed-up. For example, if further consultation or a referral into the service is

recommended, does this happen. This will help to address the impact on the teams resources but also may highlight a clinical issue if concerns have been raised that need to be met by a mental health service.

10. To develop a consistent approach to delivering the consultations within the team (i.e. preparation, format of consultation, layout of reports).

Feedback to the team

The results and recommendations were fed back to the CYPS Children in Care team and the Operational Delivery Manager on the 12th May 2016.

They felt that it was very helpful to get feedback on who they see in the consultations and what the outcomes of the consultations are. They said that this may help to inform training offered by the team (e.g. if several consultations for a specific team had similar outcomes it might be helpful to offer the team some training in that area).

They agreed that there needed to be improvements in the internal processes. The manager advised that the service is in discussions with the record management system to find a way to record consultations. In the meantime, the team discussed how they could improve their processes. To support further audit they were going to make the booking forms more specific (e.g. legal status of the child, team the social worker is from) by providing tick boxes. They also considered the outcomes of the consultations and if they made a recommendation for a referral in or a further consultation should they follow it up. They discussed possible ways to link this with the current service pathway.

They felt that further questions would be helpful in future evaluations. For example, participants were asked if it provided them with new information. It was felt that this was not the aim of the consultation but rather to provide them with an alternative, mental health perspective thus "new information" may not be capturing the outcome of a consultation.

With respect to the qualitative comments their feedback linked with recommendation six. One of their responses was about managing the social workers expectations of a consultation. For example, with respect to comments about sufficient practical advice they said that this was not always appropriate. The team also agreed that there was a long waiting list for appointments, however, a more timely appointment would not necessarily prevent a placement breakdown. It may help to think about managing the ending of that placement and transition to a new one. They suggested that a leaflet will help to provide this clearer information as well providing information about how the consultations link in with the other areas of work in the team. The team were concerned that by producing updated information to all the teams they may receive an increase in consultation requests and agreed as a team that they will need to think how they manage this effectively.

The final recommendation came out of a discussion in the feedback meeting. The team discussed their capacity to provide more consultations. It transpired that each clinician takes a slightly different approach to conducting a consultation and thus may provide a slightly different experience. It felt important to highlight this to the team so they can discuss this as a team to ensure social workers receive a consistent experience.

The team welcomed the recommendations in this report and as reported above identified different ways they will follow them up. The Operational Delivery Manager is also due to meet with the commissioners to review the service specification and felt that this may help to inform how they continue to provide this consultation in the future.

Appendix 4: Instructions to Authors

Adoption & Fostering

CoramBAAF Adoption & Fostering Academy

Editor

Roger Bullock Centre for Social Policy Dartington, UK

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Adoption & Fostering is the only quarterly UK peer reviewed journal dedicated to adoption and fostering issues. It also focuses on wider developments in childcare practice and research, providing an international, inter-disciplinary forum for academics and practitioners in social work, psychology, law, medicine, education, training and caring for children and young children.

1. Peer review policy

Adoption & Fostering operates a strictly anonymous peer review process in which the reviewer's name is withheld from the author and the author's name from the reviewer. The reviewer may at their own discretion opt to reveal their name to the author in their review but our standard policy practice is for both identities to remain concealed. Each manuscript is reviewed by at least two referees. All manuscripts are reviewed as rapidly as possible, and an editorial decision is generally reached within 6-8 weeks of submission.

2. Article types

Articles may cover any of the following: analyses of policies or the law; accounts of practice innovations and developments; findings of research and evaluations; discussions of issues relevant to fostering and adoption; critical reviews of relevant literature, theories or concepts; case studies.

All research-based articles should include brief accounts of the design, sample characteristics and data-gathering methods. Any article should clearly identify its sources and refer to previous writings where relevant. The preferred length of articles is 5,000-7,000 words excluding references.

Contributions should be both authoritative and readable. Please avoid excessive use of technical terms and explain any key words that may not be familiar to most readers.

Letters to the Editor. Readers' letters should address issues raised by published articles or should report significant new findings that merit rapid dissemination. The decision to publish is made by the Editor, in order to ensure a timely appearance in print.

Book Reviews. A list of up-to-date books for review is available from the journal's Managing Editor.

9. Manuscript style

9.1 File types

Only electronic files conforming to the journal's guidelines will be accepted. The preferred format for the text and tables of your manuscript are Word DOC, RTF, XLS. Please also refer to additional guidelines on submitting artwork [and supplemental files] below.

9.2 Journal Style

Adoption & Fostering conforms to the SAGE house style. Click here to review guidelines on SAGE UK House Style

9.3 Reference Style

Adoption & Fostering adheres to the SAGE Harvard reference style. Click here to review the guidelines on SAGE Harvard to ensure your manuscript conforms to this reference style.

If you use EndNote to manage references, download the SAGE Harvard output style by following this link and save to the appropriate folder (normally for Windows C:\Program Files\EndNote\Styles and for Mac OS X Harddrive:Applications:EndNote:Styles). Once you've done this, open EndNote and choose "Select Another Style..." from the dropdown menu in the menu bar; locate and choose this new style from the following screen.

9.4. Manuscript Preparation

The text should be double-spaced throughout and with a minimum of 3cm for left and right hand margins and 5cm at head and foot. Text should be standard 10 or 12 point.

9.4.1 Keywords and Abstracts: Helping readers find your article online

The title, keywords and abstract are key to ensuring readers find your article online through online search engines such as Google. Please refer to the information and guidance on how best to title your article, write your abstract and select your keywords by visiting SAGE's Journal Author Gateway Guidelines on How to Help Readers Find Your Article Online.

9.4.2 Corresponding Author Contact details

Provide full contact details for the corresponding author including email, mailing address and telephone numbers. Academic affiliations are required for all co-authors. These details should be presented separately to the main text of the article to facilitate anonymous peer review.

9.4.3 Guidelines for submitting artwork, figures and other graphics

For guidance on the preparation of illustrations, pictures and graphs in electronic format, please visit SAGE's Manuscript Submission Guidelines.
Figures supplied in colour will appear in colour online regardless of whether or not these illustrations are reproduced in colour in the printed version. For specifically requested colour reproduction in print, you will receive information regarding the costs from SAGE after receipt of your accepted article.

Avoid confusion between ambiguous characters and take care to ensure that subscripts and superscripts are clear. Numbers below 11 should be written out in the text unless used in conjunction with units (e.g. three apples, 4 kg). Full points (not commas) should be used for decimals. For numbers less than one, a nought should be inserted before the decimal point. Use commas within numbers (e.g. 10,000).

9.4.4 Guidelines for submitting supplemental files

Adoption & Fostering does not currently accept supplemental files.

Name of trainee: Clare Dixon

Contact details:c.dixon@bath.ac.uk

Main Research Project:

The psychological impact of social support following a traumatic event

The word count: *6806*

(excluding abstract, tables, figures and references)

The date: May 2016

Internal supervisor: Sarah Halligan; Rachel Hiller

Target Journal: Journal of Abnormal Child Psychology

Abstract

Children may use social support to manage symptoms of post-traumatic stress disorder (PTSD). Good *perceived* social support is associated with fewer PTSD symptoms. Limited research exists about *actual* support children receive post-trauma and whether this is associated with PTSD. This study explored *actual* and *perceived* support, factors that influence *actual* and *perceived* support and the relationship between social support and PTSD 4-weeks and 3-months post-trauma. Eighty-nine children and their parents completed measures of PTSD and social support 4-weeks after attending the emergency department following a single-incident trauma. Seventy children completed PTSD measures 3-months post-trauma. Children had good levels of *perceived* social support which was associated with lower perceived barriers to support, after controlling for gender. *Perceived* social support at 4-weeks predicted PTSD cross-sectionally, after controlling for age, but did not predict change in PTSD over the first 3-months post-trauma. Eighty-percent of children felt they needed support post-trauma, seeking it from parents or friends. *Actual* support did not predict PTSD cross-sectionally or longitudinally. These findings support previous research that *perceived* social support is protective post-trauma. More information is needed about what support children want post-trauma and whether they receive this. These findings will help inform interventions to promote *perceived* social support post-trauma.

Keywords: PTSD, social support, children, trauma, perceived support, actual support

Introduction

A vast number of children and young people are exposed to potentially traumatic experiences (e.g. road traffic collisions [RTC], assaults) each year. Whilst most of these children will suffer no psychological consequences, meta-analyses suggest that approximately 16% of children may go on to develop symptoms of Posttraumatic Stress Disorder (PTSD), in addition to physical and other psychological consequences (Alisic et al., 2014). Longer term follow-ups have also found that if symptoms are left untreated, between 10-30% will continue to experience chronic symptoms (Le Brocque, Hendrikz, & Kenardy, 2010; Yule et al., 2000). These figures represent a poor prognosis for symptoms that go untreated. Research is exploring factors which might predict or influence recovery from post-traumatic symptoms (Bryant et al., 2015; Trickey, Siddaway, Meiser-Stedman, Serpell, & Field, 2012).

Cognitive model of PTSD

The cognitive model of PTSD (Ehlers & Clark, 2000) suggests that PTSD is characterised by two key processes which lead to a sense of current threat: appraisals of the trauma and nature of the trauma memory. Once an individual experiences a sense of current threat they develop behavioural and cognitive strategies to reduce the threat and distress. However, these coping strategies may maintain the disorder. Reviews have found that the cognitive model is sufficient to be applied to children with the consideration of developmental factors (Meiser-Stedman, 2002; Salmon & Bryant, 2002).

Cognitive theorists propose that the strategies trauma survivors develop to control their posttraumatic distress can maintain symptoms in several ways: directly produce symptoms (e.g. avoidance); prevent change in appraisals by preventing addition of new information; and, prevent change in memory by preventing the elaboration and integration of the trauma memory with new information. The coping strategies that people use are consistent over the first 3-months (Marsac, Donlon, Winston, & Kassam-Adams, 2013). The development of PTSD is most strongly associated with avoidant coping strategies such as social withdrawal, thought suppression and distraction (Marsac et al., 2013; Stallard, Velleman, Langsford, & Baldwin, 2001). Other risk factors for the development of PTSD include gender, severity of trauma exposure, age and peri and post-trauma experiences (Alisic et al., 2014; Bryant et al., 2015; Le Brocque et al., 2010; Trickey et al., 2012).

Adults potentially play a key part in the coping strategies that children use. They may be able to help the child by discussing the event with them to provide a framework of understanding and aid the processing and integration of the memory and help by recognising their child's distress and helping them to learn how to manage and react appropriately to distress (Marsac et al., 2013). Children take a lot of their emotional cues from their parents (Davidhizar & Shearer, 2002) and it has been suggested that negative parental emotional reactions may lead children to avoid seeking parental support (Gil-Rivas, Silver, Holman, McIntosh, & Poulin, 2007). *Perceived* social support has been found to be a consistent predictor of psychological outcomes post-trauma (Trickey et al., 2012). Although we know that adults are likely to play a key role, we have little knowledge of the *actual* support children receive and who they turn to for support after a trauma.

Social Support

Social support is the presence and availability of people that we perceive to care about and value us and we can turn to for support in times of need and is important in maintaining the psychological and physical well-being of an individual (Sarason, Levine, Basham, & Sarason, 1983). Social support has several functional properties: emotional (providing caring, love and empathy), instrumental/tangible (providing material or behavioural support), informational (providing guidance or feedback that can help to resolve a problem), appraisal (providing information relevant to self-evaluation), social companionship/positive social interaction (spending time with others in leisure activities) (Armstrong, Birnie-Lefcovitch, & Ungar, 2005; Sherbourne & Stewart, 1991). Social support is often measured in different ways so it is important to consider the three distinctions that are often made. *Structural* support refers to the number of people one has in their social network and the cohesiveness or quality of the network (Barrera Jr, 1986; Sarason et al., 1983; Sherbourne & Stewart, 1991). *Perceived* social support is the perception or the belief that you are connected to other people, social support is available if one needs it and that if you were to seek that support it would be useful (Barrera Jr, 1986; Thoits, 1995). *Enacted* or *Actual* social support is the actual support that someone receives, thus the amount and type/quality of support that one individual actually provides to another (Barrera Jr, 1986).

Thoits (1995) suggested that *perceived* social support is a better predictor of mental health outcomes than *structural* support. Several studies have supported Thoits' view and found a negative correlation between *perceived* social support and psychological disorders

(Armstrong et al., 2005; Marsac et al., 2013; Sarason et al., 1983). There is no clear research that looks at whether *actual* support impacts on mental outcomes, however some researchers have suggested that how someone perceives their support will influence whether or not they seek it (Coyne & DeLongis, 1986; Davidhizar & Shearer, 2002) but no research has provided evidence for the relationship between *perceived* and *actual* support.

Social support and PTSD

Previous studies have found that children use a variety of coping strategies following trauma, with social support being consistently one of the most used strategies resulting in the most satisfaction (Marsac et al., 2013; Stallard et al., 2001; Vernberg, LaGreca, Silverman, & Prinstein, 1996). However, the research has focused on children's *perceived* or *structural* support. It remains unclear the *actual* support children receive after a trauma, who they actually turn to for support, the perceived helpfulness, the influence of seeking support from different people (e.g. parents, peers, school) and possible barriers to accessing *actual* support.

In the adult literature, *perceived* negative social support, the absence of support or perceived negative interactions has been found to be a predictor of acute stress disorder and PTSD (Charuvastra & Cloitre, 2008; Holeva, Tarrier, & Wells, 2001; Hyman, Gold, & Cott, 2003). *Perceived* support was more strongly associated with PTSD than the number of people available (*structural* support) to provide support (Charuvastra & Cloitre, 2008; Platt, Keyes, & Koenen, 2014). However, other studies have found that *perceived* social support does not predict PTSD but may impact on broader post-trauma adjustment (Cai, Ding, Tang, Wu, & Yang, 2014; Chan, Lowe, Weber, & Rhodes, 2015). Although some of these studies refer to *actual* support, they have in-fact measured *perceived* support, thus little is known about the impact of *actual* support received on the development of PTSD in adults.

The picture is similar in children. A meta-analytic review found, from four studies, that low *perceived* social support is reliably associated with poorer outcomes post-trauma, and is one of the most important predictors of child PTSD, demonstrating a medium to large effect size (Trickey et al., 2012). There is mixed evidence as to whether *perceived* support from parents (Tremblay, Hébert, & Piché, 1999) or from peers (La Greca, Silverman, Lai, & Jaccard, 2010) results in differing outcomes. There is also evidence that the experience

of a traumatic event can reduce *perceived* social support for children and adolescents (Lauterbach, Koch, & Porter, 2007; Wilson & Scarpa, 2014).

Early research has started to look at the mechanisms by which *perceived* social support influences the psychological outcomes post-trauma. Mauheux and Price (2016) hypothesised that if an individual experiences positive social support they may have more positive and adaptive self-perceptions, suggesting that self-compassion could be a protective factor. They found some support for their hypothesis as self-compassion was negatively correlated with PTSD and *perceived* social support was positively correlated with self-compassion. Their hypothesis implies that this mechanism could also be important to consider in how *actual* support may be related to PTSD.
Other research has focused on how the relationship between *perceived* social support and PTSD could be mediated by cognitions and appraisals of the trauma. Charuvastra and Cloitre (2008) suggested that negative interactions with support or negative experiences of support post-trauma may reinforce negative appraisals that the world is hostile and unsafe. The evidence for positive interactions was more variable and results suggested it depended on who provided the support and whether it met the individual's needs. However, in some circumstances positive interactions or positive experiences of support could help to challenge the traumatic appraisals and rebuild and strengthen pre-trauma beliefs. Despite their review of the evidence suggesting this is about the *actual* support people receive, the measurement is of one's *perceived* social support. Hitchcock, Ellis, Williamson and Nixon (2015) looked at this mechanism in children post-trauma. One-month post-trauma, they found that maladaptive (not adaptive) appraisals of the trauma indirectly mediated the relationship between the child's rating of *perceived* social support and PTSD at one month and 6-months post-trauma. Of note, they found no significant relationship between *perceived* social support and PTSD.

Research has also explored factors which might be associated with rates of *perceived* social support. Armsden and Greenberg (1987) found that children with a more secure attachment were more likely to seek social support and were more likely to have positive outcomes to stressful events. Trauma type, age and gender have also been found to influence social support (Boldero, 1995; Boldero & Fallon, 1995; Cauce, Felner, & Primavera, 1982). More recently, La Greca et al., (2010) found that severity of exposure to a trauma, increased loss and additional life events following a trauma were found to have a negative impact on a child's *perceived* social support post-trauma The literature

demonstrates that *perceived* social support is an important predictor of post-trauma psychological adjustment and has started to explore potential mechanisms that may explain this relationship. This suggests that programmes that aim to improve the informal support provided to children or improve children's *perceived* support post-trauma may be useful. However, there is little information regarding the *actual* support children receive post-trauma and the influence this may have on psychological outcomes post-trauma. It is unknown where children are most likely to seek support, how much support they receive and what barriers exist to accessing support. This study aims to try and replicate previous findings about *perceived* social support and to address the gap in the literature through the exploration of children's *actual* support seeking following a single-incident trauma. This study also seeks to identify factors that may impact on a child's *perceived* and *actual* support (e.g., parental psychopathology, trauma severity), and investigate whether *actual* support as well as *perceived* support may be associated with the child's PTSD symptoms post-trauma.

Research Questions

1. Where do children seek support following a trauma?
2. What factors are associated with children's actual support seeking or perceived support post-trauma:
    a. barriers to support?
    b. parent psychopathology?
    c. age; gender; trauma severity?
3. Is actual use of support post-trauma associated with the development of PTSD one-month and 3-months post-trauma?
4. Is perceived support post-trauma associated with the development of PTSD one-month and 3-months post-trauma?

Method

Design

This study was part of a prospective longitudinal study that received IRAS ethical approval (Approval number 137454). The relevant outcomes from the 4-week and 3-month assessments will be discussed.

Participants

Participants were 6-13 year-old children who had attended one of four emergency departments (ED) in the South West following an event that met the DSM-IV PTSD

criteria for a traumatic event, and their parent or guardian. Exclusion criteria were: intellectual disability that prevents mainstream schooling, history of organic brain damage, currently presenting with self-harm or significant suicidal ideation, inability to speak English or child subject to current safeguarding concerns.

Procedure

Potential participants (child and parent) were identified by research nurses following their ED attendance. Following verbal consent to the research nurses, families contact details were passed to the researchers at the University of Bath.

Families were contacted by one of the university researchers to arrange the first assessment within 4-weeks of their attendance at the ED. Information sheets were posted. At the first assessment (T1), two researchers visited participants at home. A battery of questionnaires was completed by the child and parent separately.

Participants were contacted by telephone 3-months after their attendance at the ED (T2) and asked to complete questionnaires either online, by post or over the phone if necessary.

Child Focused Measures

The *University of California at Los Angeles Post-traumatic Stress Disorder Reaction Index* (UCLA-RI: Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) is a self-report measure assessing children's current symptoms of PTSD according to DSM-IV criteria. All three versions of the measure were used as appropriate: child, adolescent and parent-report. Each measure comprises three parts. The first part (parent version only) is a checklist of traumatic experiences the child may have experienced in their lifetime. The second part is related to DSM-IV criterion A trauma exposure, and assesses the child's subjective reactions at the time of the trauma ('*yes'* or '*no*' responses). The third part consists of 20 (child), 21 (parent) or 22 (adolescent) items assessing symptoms of DSM-IV PTSD, rated on a 5-point likert scale from *'none'* to *'most'* of how much the symptom has bothered them in the last month. The answers from the 17 symptom items in part three are used to calculate a score of PTSD. Where children meet criterion A based on part one and two, a score of above 38 on part three has the greatest sensitivity and specificity to meet a diagnosis of PTSD (Steinberg, Brymer, Decker, & Pynoos, 2004). A review of the psychometric characteristics has found that the scale has excellent psychometric properties with a consistent finding of $\alpha > .90$.

Trauma Severity. On the UCLA-Parent, part two has three items which ask about objective factors which could be indicators of trauma severity ("Was the child seriously injured";

"Was someone else seriously injured"; "Did someone die"). A total of these items was used as a measure of trauma severity.

The *Multidimensional Scale of Perceived Social Support* (MSPSS: Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-item self-report measure rated on a 7-point likert scale from *'very strongly disagree'* to *'very strongly agree'* with a higher score representing greater perceived social support. There are three subscales: friends, family and significant others. The psychometric properties are good with $\alpha \geq .85$ for the total and subscales. (Appendix 5).

Actual Social Support. No measure was identified which assesses actual social support available to young people or barriers to the use of support following traumatic events. Therefore, a measure was developed (*Children's Support Questionnaire: CSQ*) for this study. The questionnaire wanted to find out more about whether children felt they needed support following a trauma, who they go to for support and how helpful they found that support in contrast to other measures which only look at perceived and structural support. Question were developed which asked about potential barriers children had to seeking support. These questions were based on experiences of working with children with trauma and barriers they identified. The questionnaire was sent to the two supervisors of the project in addition to two experts in the field of PTSD research. Feedback from the experts was incorporated. The questionnaire was then piloted on four non-trauma exposed children. The aim of the piloting was to check the format of the questionnaire and the wording of the questions. The final questionnaire was presented in two parts. Part one asks two questions about whether children feel they have needed support since the trauma. These items were similar and significantly correlated. Therefore, item one was reversed and the two items were combined to create a total score ranging from 0 to 6, with 0 indicating they did not need support. A cross-tab identified the number of children that needed support post-trauma. If children said they did not need support (n = 18 out of 89) they were excluded from further analyses looking at actual support. They were still included in analyses of perceived support.

The questionnaire then presented eight-items asking children about different people they may have gone to for support. They first rated how often they have gone to that person for support since the trauma on a 4-point scale from *'never'* to *'a lot'* and then how helpful they found their support on a 4-point scale from *'not at all helpful'* to *'very helpful'*. The score from the first eight items was summed to get a score ranging from 0 to 24, with 24 indicating greater actual support use. This score was used as the main outcome measure for

actual support. This measure of actual support had good psychometric properties in this sample (internal consistency: α = .74).

A measure of perceived helpfulness of the support they received was calculated from on average over the eight items with a score ranging from 0 (*not helpful*) to 3 (*very helpful*). Part two comprises 8-items rated on a 4-point scale from *'not at all'* to *'a lot'* which assess the potential barriers to children seeking support. A principal component analysis suggested it was appropriate for these items to be summed to calculate a total score ranging from 0 to 24, with a higher score indicating more perceived barriers to accessing support (Appendix 6). This measure of perceived barriers to support had good psychometric properties in this sample (internal consistency α = .83).

Parent Focused Measures

The *Posttraumatic Diagnostic Scale* (PDS: Foa, Cashman, Jaycox, & Perry, 1997) is a 19-item self-report measure assessing symptoms of PTSD. Items are rated on a 4-point likert scale from *'not at all/only one time'* to *'five or more times a week/almost always'.* Subscales can be calculated for each of the DSM-IV criteria and a higher score indicates more severe symptoms of PTSD. Cut off scores are available to rate the severity of symptoms. The total score and each of the subscales have good psychometric properties with α > .75 (Foa et al., 1997).

The *Depression and Anxiety and Stress Scale – Short Form* (*DASS:* Lovibond, 1995; Lovibond & Lovibond, 1995) is a 21-item self-report measure assessing general symptoms of adult depression and anxiety. Items are rated on a 4-point likert scale from *'never'* to *'almost always'*. The measure has three subscales (depression, anxiety and stress) and higher scores indicate more severe symptoms. Cut off scores are available to categorise the severity of symptoms. Psychometric properties are good with α > .80 on the total scale and subscales (Henry & Crawford, 2005)

A parent-report measure (CSQ-Parent) was developed to look at parent's views on how much support their child has needed since the trauma and their perceived ability to provide this support (Appendix 7).

Data Analysis

The data were analysed using SPSS Statistics Version 22.

All data were explored for normality by plotting histograms and running Kolmogorov-Smirnov tests. Data were not normally distributed. Parametric tests were reported as they did not produce different findings to non-parametric tests. Descriptive statistics were used

to define the sample in terms of symptoms of PTSD, age, gender and trauma severity. Due to the presence of missing data, t-tests were run to see if there were any differences on T1 UCLA-Child between those who did and did not complete the MSPSS at T1, and also those who did and did not complete T2 assessment. T-tests were conducted to see if there was a significant reduction in the scores on the UCLA-Child and Parent, PDS and DASS from T1 to T2.

Descriptive statistics were used to address research question 1.

To address research question 2, correlations were run to see which factors (perceived barriers to seeking support; parental psychopathology [DASS, PDS]) were associated with children's support seeking at T1. Pearson's product-moment correlation coefficient, Spearman's Rho correlation and point-biserial correlations were used as appropriate. Potential confounding variables of age, gender and trauma severity (previously highlighted in the literature) were investigated and taken account when using hierarchical linear regression where appropriate.

In order to address research questions 3 and 4, Pearson's product-moment correlations were conducted to see whether or not actual support or perceived support were associated with PTSD at T1 and change in PTSD symptoms between T1 and T2. Potential confounding variables of age, gender and trauma severity (previously highlighted in the literature) were investigated and taken account when using hierarchical linear regression where appropriate.

Results

Participants

Participants were 104 children (62% male) and their primary caregiver. Children ranged in age from 6 to 13 years old (M = 9.71, SD = 1.96). Children attended the ED following their involvement in a single-incident trauma, with the most common event being a road traffic collision (52.9%). See Table 1 for a summary of the characteristics of the sample.

Of the 104 participant dyads recruited, 89 completed the social support measures at T1 (4-weeks post-trauma). There was no significant difference in T1 UCLA-Child (PTSD) for those who did (mean = 17.85, SD = 12.56) or did not (mean = 22.40, SD = 13.29) complete the social support measures at T1, t(102) =1.29, p=.20.

At T2 (3 months post-trauma) 70 participants completed the UCLA-Child. At the time of writing four people had not reached the time frame to complete their T2 assessment (although are included in the T1 data). There was no significant difference in the T1

UCLA-Child scores for those who did (mean = 18.79, SD = 12.66) or did not (mean = 17.94, SD = 12.96) complete the T2 assessment, t(102) =-.317, *p*=.75.

Table 1. *Descriptive statistics of the sample*

	N (%)	Mean	SD	Min	Max
Age (years)	104	9.71	1.96	6	13
Gender					
Male	64 (61.5)				
Female	40 (38.5)				
Ethnicity					
White British	83 (79.8)				
Black British	1 (1.0)				
Black Caribbean	1(1.0)				
Asian	2 (1.9)				
Other	4 (3.8)				
Missing	13 (12.5)				
Trauma					
Road Traffic Collision	55 (52.9)				
Assault	2 (1.9)				
Acute Medical Emergency	9 (8.7)				
Sporting Injury	8 (7.7)				
Other Accidental	5 (4.8)				
Fall	16 (15.4)				
Other	9 (8.7)				
Trauma Severity	104	3.44	2.19	0	9
T1					
UCLA – Child	104	18.51	12.70	0	48
UCLA - Parent	99	14.99	13.94	0	60
PDS	103	12.04	11.82	0	42
DASS – total	104	14.99	14.63	0	57
T2					
UCLA – Child	75	15.52*	12.56	0	50
UCLA - Parent	81	14.38	13.77	0	62
PDS	70	7.17*	8.50	0	39
DASS - total	71	11.90*	1.38	0	50
UCLA Child: Change score (T1-T2)	75	3.03	12.89	-36	32

**Significantly different from T1 scores*

PTSD

Based on the UCLA-Child scores at T1, 10.6% of children scored above 38, indicating a possible diagnosis of PTSD. This reduced to 4.8% at T2. The mean change score on the UCLA-Child was 3.03 (SD = 12.89). A positive score indicates an improvement in symptoms.

Based on the PDS, a measure of PTSD in adults, 4.9% of the parents in the samples scored in the severe range at T1 and 19.4% in the moderate-severe range. At T2, this reduced to 2.9% and 7.1% respectively.

See Table 1 for more details on the clinical scores for the sample.

Where do children seek support following a trauma?

Perceived Social Support. The MSPSS is a standardised self-report measure of *perceived* social support. The score ranges from 1 – 7 with a higher score indicating greater perceived social support. Eighty-nine participants completed this measure at T1 with a mean of 5.75 (SD = 1.21) (*Table 2)* suggesting on average children perceived that they had good support. Based on the subscales, children had similar perceived support from their friends (mean = 5.44, SD = 1.63) and significant others (mean = 5.44, SD = 1.63) but perceived slightly higher levels of support from their family (mean = 6.05, SD = 1.24).

Table 2. *Descriptive statistics for perceived and actual use of social support*

	N	Mean	SD	Min	Max
MSPSS					
Total	89	5.75	1.21	1.08	7.00
Friends	89	5.44	1.63	1.00	7.00
Family	89	6.05	1.24	1.25	7.00
Significant Others	89	5.44	1.63	1.00	7.00
CSQ – Child					
Needed Support	89	2.44	1.66	0.00	6.00
Actual use of Support*	70	7.74	4.48	1	20
Helpfulness*	70	2.26	0.48	1.20	3.00

*These scores excluded participants who rated they did not need support

Actual Social Support. Eighty-nine children completed the CSQ-Child, a measure developed for this study to look at *actual* use of social support post-trauma. A cross-tabs matrix identified that 18 children, of the 89 who completed the measure, felt they did not

need any support post-trauma. If children rated that they did not need support they were excluded from further analyses which looked at the *actual* use of support, leaving 71 participants.

Based on 70 participants who sought support (one did not complete this part of the questionnaire) the most common person that people went to for support following the trauma was their mother (93%). The top three people in the sample were mother, followed by a friend (77.5%) and then father (76%). On average, children rated their support as 'often helpful' (mean = 2.26, SD = .48). No participants rated their support as not at all helpful.

Barriers. Children were asked about possible barriers they had to seeking support *(Table 3)*. On each of the items, approximately 50% of the sample rated *"not at all"* indicating that they did not feel these factors were barriers to support. The next most frequently rated on each of the items was *"sometimes".* This suggests that overall, children felt that these factors were not or were only sometimes a barrier to seeking support. The items that people were more likely to identify as potential barriers to seeking support (rated as *often* or *a lot*) were feeling that people think they should be ok (21.1%) and worrying that people won't know what to do (18.3%).

Table 3. *Descriptive statistics for individual items on the CSQ-Child about barriers to seeking support*

	N	Mean	SD	Min	Max
1…I think people think I should be ok and just get on with things without any help from others.	70	0.86	0.92	0	3
2…I think other people don't think I need help.	70	0.66	0.81	0	3
3…I think people won't listen to me when I tell them how I am feeling.	69	0.61	0.91	0	3
4…I am worried people might get annoyed or upset if I speak to them about how I'm feeling.	70	0.47	0.76	0	3
5…I am worried that people won't know what to do or what to say to me.	70	0.76	0.82	0	3
6…I don't think people have the time to help or support me.	70	0.56	0.90	0	3
7…People aren't helpful, or make me feel worse, when I go to them for support.	70	0.29	0.66	0	3
8…I think people won't understand how I am feeling.	70	0.69	0.88	0	3
Total score	70	4.87	4.48	0.00	24.00

Relationship between perceived and actual social support. A Pearson's product moment correlation found there was no significant relationship between *perceived* and *actual* social support in this sample (n=69. r=-.003, *p*=.98).

Parent Responses

Parents were asked questions about their perceptions of the child's support seeking (Appendix 2). Twenty-three parents (22.1%) said they felt their child didn't need any more support than normal, which is slightly higher than the 18 children who said they didn't need any support following the trauma. The majority of the parents said their child hadn't (36.5%) or had only sometimes (38.5%) come to them for emotional support post-trauma. 82.7% of parents said they had tried to make themselves more available to the child than normal (either sometimes, often or a lot). When asked "If your child has asked for support do you feel you have known the best way to offer it" only 5.8% of parents rated *not at all.* (*Table 4).*

Table 4. *Descriptive statistics for the full sample on the CSQ-Parent*

	N	**Mean**	**SD**	**Min**	**Max**
Do you feel you child has needed any more emotional support than usual?	104	1.27	0.98	0	3
Has your child come to you for any emotional support, for example if they are feeling upset or scared about what happened?	104	0.96	0.92	0	3
Have you tried to make yourself more available to your child for support than normal?	103	1.82	1.11	0	3
If your child has asked for support do you feel you have known the best way to offer it?	99	1.93	0.92	0	3

Of the children (n=71) who said they needed support, 16 parents said they felt their child didn't need any support, 24 said their child hadn't come to them for support, 12 didn't make themselves any more available than normal.

What factors are associated with children's support seeking or children's perceived support post-trauma?

Actual Social Support. Actual social support refers to the total score (ranging from 0 -24) from the eight-items on the CSQ-Child asking how often they went to each person for support (mean = 7.74, SD = 4.48). Correlations were conducted with the variables that may be associated with children's use of social support: parent psychopathology [DASS, PDS], perceived barriers to support, age, gender and trauma severity. There were no significant correlations between any of the variables studied and actual use of social support (*Table 5).*

Table 5. *Correlations to identify factors associated with use of social support post-trauma*

	r	**Sig**
CSQ-use of support	1	-
DASS	-.002	.99
PDS	-.06	.60
Barriers	-.12	.32
Age	-.13	.28
Trauma Severity	-.07	.55
Gender*	.10	.41

*Point-Biserial correlation

Perceived support. Correlations were conducted on the whole sample with the variables that may be associated with children's perceived social support (parent psychopathology [DASS, PDS], perceived barriers to support) post-trauma. Pearson's product moment correlations found negative relationships with children's perceived barriers to support i.e. lower perceived support was associated with increased barriers to support. *(Table 6).*

Table 6. *Correlations to identify factors associated with perceived social support post-trauma*

	r	**Sig**
MSPSS	1	-
DASS	-.16	.12
PDS	-.13	.23
Barriers	-.29	.01**
Age	-.06	.59
Trauma Severity	.03	.76
Gender*	-.24	.02**

*Point-Biserial correlation
** Significant correlation ($p < .05$)

A hierarchical linear regression was run to see if there were any potential confounds of age, gender or trauma severity on the relationship with perceived support and the significant correlation with perceived barriers. All the assumptions of regression were met. In the first step of the model, the potential confounds were entered into the model (age, gender and trauma severity). The model was not significant (F (3, 83) = 1.89, p=.14, R^2 = .06). In the second step, barriers was entered into the model. There was a significant change in R^2 (p = .002) and the model accounted for 16.5% of the variance in perceived social support at T1. Gender was a significant predictor in the model (β = -.25, p = .02*)* such that boys had lower perceived social support. But after controlling for this in the first step, perceived barriers were significantly associated with perceived social support at T1 (β = -.33, p = .002*)* such that greater perceived barriers to accessing social support was associated with lower perceived social support *(Table 7)*.

Does actual use of social support at T1 predict children's PTSD symptoms at T1 or T2?
A Pearson's product-moment correlation, found that *actual* use of support at T1 was not associated with child reported PTSD symptoms on the UCLA at T1 (n=70, r=.20, p=.10).Similarly, *actual* use of support at T1 was not associated with change in PTSD symptoms from T1 to T2 (n=53, r=.21, p=.14).

Table 7. *Regression Model for the relationship between perceived barriers and perceived social support at T1*

	B	***SE B***	**β**
Step One			
Constant	6.52	.74	
Age	-.05	.07	0.07
Gender	-.60	.27	-.24*
Trauma Severity	.16	.27	.07
Step Two			
Constant	7.33	.74	
Age	-.08	.07	-.12
Gender	-.62	.26	-.25*
Trauma Severity	.08	.26	.03
Barriers	-.09	.03	-.33*

Note: R^2 = .06 for Step 1, Δ R^2 = .10 for Step 2 (p = .002) *p < .05

Does perceived social support at T1 predict children's PTSD symptoms at T1 or T2?
A Pearson's product-moment correlation found that perceived support (MSPSS) at T1 negatively predicted children's PTSD cross-sectionally (n=89, r=-.26, *p*=.01) so those with lower perceived support had higher rates of PTSD.

A hierarchical linear regression was run to see if there were any potential confounds of age, gender or trauma severity on the relationship. All the assumptions of regression were met. In the first step of the model, the potential confounds were entered into the model. The model was not significant (F (3, 85) = 2.36, *p*=.08, R^2 = .08). In the second step, perceived social support was entered into the model. There was a significant change in R^2 (*p* = .01) and the model accounted for 14.6% of the variance in PTSD at T1. Age was a significant predictor in the model (β = -.28, *p = .01)* such that younger age was associated with higher symptoms of PTSD. But after controlling for this in the first step, perceived social support was significantly associated with PTSD at T1 (β = -.27, *p = .01)* such that lower perceived social support was associated with higher PTSD symptoms *(Table 8)*.
By contrast to the significant cross-sectional association, Pearson's product-moment correlation found that perceived support at T1 was not a significant predictor of change in PTSD symptoms from T1 to T2 (n=67, r=-.13, *p*=.29).

Table 8. *Regression Model for the relationship between perceived social support and PTSD at T1*

	B	***SE B***	**β**
Step One			
Constant	35.51	7.43	
Age	-1.87	.73	-.27*
Gender	2.24	2.73	.09
Trauma Severity	-.75	2.70	-.03
Step Two			
Constant	53.39	9.93	
Age	-1.94	.70	-.28*
Gender	.51	2.73	.02
Trauma Severity	-.44	2.62	-.02
Perceived Social Support	-2.82	1.08	-.27*

Note: R^2 = .08 for Step 1, Δ R^2 = .07 for Step 2 (*p* = .009) *$p < .05$

Discussion

Perceived social support has been identified as an important predictor of children's post-trauma psychological outcomes, demonstrating medium to large effect sizes in a recent meta-analysis (Trickey et al., 2012). However, the research remains scarce on children's *actual* social support post-trauma, how this might impact on psychological outcomes and what factors might be associated with *actual* social support post-trauma.

Children in the sample reported good levels of *perceived* social support (i.e. the perception that they had support available to them if they needed it). It was found that those with more perceived barriers to seeking support had lower *perceived* social support after controlling for the significant effect of gender. Age, gender and trauma type had been found to influence *perceived* support in previous literature (Armsden & Greenberg, 1987; Boldero & Fallen, 1995; Cauce et al., 1982) and gender was replicated here. Perceived barriers had not been explored or identified as a factor before. In line with previous research (Trickey et al., 2012), *perceived* social support was found to be significantly associated with PTSD symptomatology, when controlling for the significant effect of age, four-weeks post-trauma. Paul et al., (2015) suggested that gender and trauma severity could also influence this relationship but it was not replicated here. Not supporting previous research, *perceived* support was not associated with the change in symptoms over the first 3-months post-trauma.

Eighty-percent of children in this study identified needing support post-trauma, seeking this from their parents or friends. They all perceived the support they received to be helpful and perceived few barriers to seeking support. None of the factors explored (parent psychopathology, perceived barriers, age, gender and trauma severity) were found to be associated with *actual* support. This could suggest that different factors influence *actual* support post-trauma to those that might influence someone's *perceived* support. Despite the majority of children identifying needing support and find it helpful, *actual* support use within the first 4-weeks post-trauma was not associated with PTSD symptomatology cross-sectionally or longitudinally. This could be in line with Thoits' (1995) suggestion that *perceived* support is a more important predictor.

Several studies (Alisic et al., 2014; Bryant et al., 2015; Trickey et al., 2012) have explored predictors or risk factors for the development of PTSD. These studies have found that a range of pre, peri and post-trauma factors can help to predict psychological outcomes post-

trauma. These factors include gender, trauma type (interpersonal or not), severity and exposure to the trauma, social support, fear and perceived threat to life during the trauma, comorbid psychopathology, family functioning and coping strategies post-trauma such as social withdrawal, distraction and thought suppression. However, the research suggests that these factors in isolation may not predict but the combination or interaction between the factors (Santiago et al., 2013) and this was not explored in detail here. In addition, this study only explored a limited number of possible factors. For example, pre-trauma psychopathology, co-morbid psychopathology, other trauma exposure, socio-economic factors and other coping strategies were not explored.

More recent research (Charuvastra & Cloitre, 2008; Hitchcock et al., 2015; Maheux & Price, 2016; Tremblay et al., 1999) has also looked at the mechanisms which are involved in the relationship between social support and PTSD. However, these have explored the indirect relationship where *perceived* social support and PTSD were not directly related but only related via the mechanism. This has not been explored here but it could be that cognitive appraisals or memory factors could facilitate an indirect relationship between social support (*perceived* or *actual*) and PTSD.

In addition to these findings, a correlational analysis found that there was no significant association between *perceived* and *actual* support 4-weeks post-trauma. This does not agree with some hypotheses (Coyne & DeLongis, 1986; Davidhizar & Shearer, 2002) that one's perception of support will influence how they seek it.

The finding that *perceived* social support predicted PTSD cross-sectionally, only accounted for 14.6% of the relationship, with *perceived* social support contributing 7%. This suggests there are other key factors which play a notable role. As highlighted previously, meta-analyses (Alisic et al., 2014; Bryant et al., 2015; Trickey at al., 2012) have identified a number of factors that may explain the relationship. However, an earlier paper by Vernberg, La Greca, Silverman and Prinstein (1996) suggests the findings here are similar to theirs. They found that 62% of the variance in predicting early symptoms post-trauma was explained by trauma exposure (35%), child characteristics (0.6%), social support (5.4%) and coping strategies (21%). This study only looked at one aspect of the trauma (severity), some child characteristics (age, gender) and social support and accounted for 14.6%, suggesting these results could be what is expected. Other factors such as comorbid psychopathology, injury characteristics or parents psychopathology were not explored in either model and could help to account for some additional variance. These

models also did not explore some of the indirect mechanisms that have been more recently identified such as cognitive appraisals, memory factors or internal resources (Charuvastra & Cloitre, 2008; Hitchcock et al., 2015; Mauheux & Price, 2016; Tremblay et al., 1999). However, these results do suggest that *perceived* support is important in the initial weeks post-trauma and boys and those with greater perceived barriers have lower *perceived* support thus interventions may need to think about this. What these findings do not tell us is what it is that children perceive from their support that plays a protective role.

Limitations

The rates of PTSD in this sample are slightly lower than research suggests (Alisic et al., 2014) which questions whether this sample is representative of children that are exposed to single-incident traumas. Also, the children in this sample reported good levels of perceived support and this was not normally distributed. This also questions whether this sample is representative of the population as children with lower perceived social support may be under-represented.

Only 67% of the whole sample completed follow-up data. Although no significant differences were found between completers and non-completers in T1 PTSD rates, it is important to consider the potential bias on the results. For example, it is unknown whether those who did not complete T2 represent a certain group in our sample, such as those with higher symptomatology at T2 or those with lower perceived social support. Similarly, this sample only represents children who had low perceived barriers to accessing their support and they all found the support their received helpful, thus not giving a voice to those children who perceive lots of barriers to accessing support

One of the main limitations is with the format of the CSQ-Child. Feedback was that it was confusing to complete which may have impacted the accuracy. In particular, could children identify how often they went to people for support specifically for the trauma and how helpful this particular aspect of support was? The questionnaire also asked about barriers to support. The majority of children didn't identify these as barriers suggesting this needs to be explored further in future research. There were additional limitations with the way the CSQ measured *actual* social support. Previous studies have argued that asking people about the support they receive is still their perception of support rather than objectively what they receive. In this study, we asked how often children sought support from others and how helpful they found it, rather than what support they actually received. It could be

that children sought support following a trauma but they didn't actually receive this support. . In line with this, the way this question is phrased only asks children about the support children seek following a trauma, thus implying that children are expected to actively seek support in order to receive it. The questionnaire does not consider support children may receive from those around them, irrespective of whether they actively sought it. It could also be that children might not link the support they seek or receive with needing support for the trauma (e.g. they might feel upset bit not necessarily feel this is because of their traumatic experience). Crucially, these results do not tell us what it is that children were seeking support for and whether they actually received the support they sought. Finally, the use of this questionnaire in this study assumes that social support is a factor that may improve psychological outcomes post-trauma. However, it needs to be considered that the support that children receive following a trauma could also be a maintaining factor. For example, PTSD is strongly linked with avoidant coping and avoidance of cognitive and physical reminders of the trauma. If children ask for support to engage in this and they receive support to avoid trauma reminders, this could be a maintaining factor for symptoms of trauma. If those around children encourage them to confront reminders and talk about the event, children may not see this as supportive or helpful but this could potentially help to promote post-trauma recovery.

Clinical Implications

This study has identified that most children feel they need support post-trauma and they are likely to seek it from their parents or friends. This was not in complete agreement with the parents reports thus it might be important to inform parents about this finding post-trauma. Lower perceived support was significantly associated with increased PTSD symptomatology 4-weeks post-trauma. Boys and those who perceived more barriers to seeking support had lower rates of perceived social support suggesting they might be the most at risk. Thus, interventions in the initial aftermath post-trauma might be most helpful targeting a child's perceived rates of social support, particularly paying attention to those children who might be more at risk.

Future Research

Due to the high rates of children saying they need support and that they find it helpful, it would be beneficial to find out more about what children feel they need support for, whether they are receiving this and the impact it may have on psychopathology. Similarly, several studies now support that *perceived* social support is associated with better

psychological outcomes post-trauma (Charuvastra & Cloitre, 2008; Holeva et al., 2001; Hyman et al., 2003; Platt et al., 2014; Trickey et al., 2012) but it is unknown what it is that children perceive from their support that influences this protective function. These things need to be explored further in future research.

The way in which *actual* support is measured needs to be improved. It needs to take into account support children receive without actively seeking it, whether or not they receive support when they do seek it and it also needs to look in more detail at the role support plays in the recovery and the maintenance of post-trauma symptoms. Research also needs to be more explorative to address limitations of this work to find out more about the reasons children seek *actual* support, what it is that they *perceive* from support that is protective and to find out more about what they perceive the barriers to seeking support to be as many children in this sample did not identify with the barriers given in the questionnaire. This qualitative exploration can provide a better basis for developing more structured and standardised measures of *perceived* and *actual* social support.

The lack of association with the longitudinal findings also does not help to explain any further about the trajectory of untreated symptoms and factors that have been found to predict PTSD and factors associated with social support need to be explored in more detail. In line with more recent research (Hitchcock et al., 2015) this work would benefit from exploring the direct and indirect mechanisms which may help to explain the relationship between social support and PTSD.

Results also suggested that parents perceptions of their child's support needs post-trauma I different from the child's own ratings. It would be interesting to explore this further and whether or not parent's perceptions of their child's support needs are linked to their ratings of their child's symptoms post-trauma.

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Appendix 5: Multidimensional Perceived Social Support Scale– MSPSS

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement since the event that led to you attending the emergency department.

Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

1.	There is a special person around when I am in need.	1	2	3	4	5	6	7
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
3.	My family really tries to help me.	1	2	3	4	5	6	7
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6.	My friends really try to help me.	1	2	3	4	5	6	7
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7

Appendix 6: Children's Support Seeking Questionnaire – Child Version

PROTECT Study – CSQ – Version 2

We would like to ask you some questions about how you have been feeling since the event that led to you attending the emergency department. We are interested to know about the different places and people you might have gone to for help or support about how you have been feeling since the event.

Please indicate how true the statements are for you.

PART 1

1.	Since the event, I have been able to cope with how I am feeling on my own, without any help from others.	*Not at all*	*Sometimes*	*Often*
2.	Since the event, I have needed/wanted to talk to someone for support or advice about how I am feeling about what happened to me.	*Not at all*	*Sometimes*	*Often*
3.	If you have needed support for how you have been feeling about the event, who was the main person you went to?			

The next questions are about who you have gone to for support for how you've been feeling <u>about the event</u> (e.g. if you've felt worried, scared or upset). We're also interested in how helpful you have found this support.

	How often have you gone to them for support?				*If you went to them for support, how helpful did you find their support?*			
	Never	*Sometimes (less that once a week)*	*Often (2 – 4 times a week)*	*A lot (5 or more times a week)*	*Not at all helpful*	*A little bit helpful*	*Quite helpful*	*Very helpful*
Mother	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Father	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Other adult relative Who was it?.....	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Friend	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Hospital Staff	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
An adult at school. Who was it? ……..…	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Internet / Helpline. What was it?.....	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Is there anyone else you've gone to. If so, who were they? …… ……	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

PART 2

For the next questions we will be asking you a bit more about the support you have had from people since the event.

Please indicate how true each question is for you.

Since the event that led to me attending the emergency department, I asked for support…….

		Not at all / Did not seek support	*Sometimes*	*Often*	*A lot*
1.	…to give me a chance to talk through what happened	[ ]	[ ]	[ ]	[ ]
2.	…to help me understand and make sense of what happened	[ ]	[ ]	[ ]	[ ]
3.	…to help me remember or fill in gaps in my memory about what happened	[ ]	[ ]	[ ]	[ ]
4.	…because my memories about what happened are confusing or jumbled up	[ ]	[ ]	[ ]	[ ]
5.	…to talk about my thoughts about what happened e.g. thinking it was my fault or how it could have been prevented	[ ]	[ ]	[ ]	[ ]
6.	…to check whether my reactions are normal	[ ]	[ ]	[ ]	[ ]
7.	…to help me understand why this happened	[ ]	[ ]	[ ]	[ ]
8.	…because I was worried something like this might happen again	[ ]	[ ]	[ ]	[ ]
9.	…because I was worried that everything had changed for the worse since the event.	[ ]	[ ]	[ ]	[ ]
10.	…to help me cope at times when I have become really upset, sad, scared, angry or confused about what happened	[ ]	[ ]	[ ]	[ ]
11.	…to help me feel safer and less scared about how I'm feeling	[ ]	[ ]	[ ]	[ ]
12.	…to help me when my memories or thoughts about what happened become too scary or upsetting.	[ ]	[ ]	[ ]	[ ]
13.	…to help me find the best way to deal with how I have been feeling	[ ]	[ ]	[ ]	[ ]
14.	…to help me know the best way to respond to my feelings	[ ]	[ ]	[ ]	[ ]
15.	…to help me come to terms with or confront my fears about what happened	[ ]	[ ]	[ ]	[ ]

For the last few questions I will be asking you about things that might have made it more difficult for you to ask for support since the event.

		Not at all	*Sometimes*	*Often*	*A lot*
1.	I think people think I should be ok and just get on with things without any help from others	[ ]	[ ]	[ ]	[ ]
2.	I think other people don't think I need help	[ ]	[ ]	[ ]	[ ]
3.	I think people won't listen to me when I tell them how I'm feeling	[ ]	[ ]	[ ]	[ ]
4.	I am worried people might get annoyed or upset if I speak to them about how I'm feeling.	[ ]	[ ]	[ ]	[ ]
5.	I am worried that people won't know what to do or what to say to me	[ ]	[ ]	[ ]	[ ]
6.	I don't think that people have the time to help or support me	[ ]	[ ]	[ ]	[ ]
7.	People aren't helpful, or make me feel worse, when I go to them for support	[ ]	[ ]	[ ]	[ ]
8.	I think people won't understand how I am feeling	[ ]	[ ]	[ ]	[ ]

Thank you for taking the time to complete the questions!

Appendix 7: Children's Support Seeking Questionnaire – Parent Version

		Not at all	*Sometimes*	*Often*	*A lot / Very much*
1.	Do you feel that your child has needed any more emotional support than usual?	[0]	[1]	[2]	[3]
2.	Has your child come to you for any emotional support, for example if they are feeling upset or scared about what happened?	[0]	[1]	[2]	[3]
3.	Have you tried to make yourself more available to your child for support than normal?	[0]	[1]	[2]	[3]
4.	If your child has asked for support do you feel you have known the best way to offer it?	[0]	[1]	[2]	[3]
5.	If you had been offered advice on how best to support your child following the trauma, would this have been helpful?	*Yes*	*No*		*Not sure*

Appendix 8: Instructions for Authors

Journal of Abnormal Child Psychology

An official publication of the International Society for Research in Child and Adolescent Psychopathology
Editor-in-Chief: Charlotte Johnston
ISSN: 0091-0627 (print version)
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The Journal of Abnormal Child Psychology brings together the latest research on psychopathology in childhood and adolescence, with an emphasis on empirical studies of the major childhood disorders (the disruptive behaviour disorders, depression, anxiety, and pervasive developmental disorders). Studies focus on the epidemiology, etiology, assessment, treatment, prognosis, follow-up, and developmental course of child and adolescent disorders. Studies highlighting risk and protective factors, the ecology and correlates of children's behavior problems, and advances in prevention and treatment are featured.

The Journal of Abnormal Child Psychology is the official journal of the International Society for Research in Child and Adolescent Psychopathology (ISRCAP), a multidisciplinary scientific society.

Manuscript Submission

Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.

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The title page should include:

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A concise and informative title

The affiliation(s) and address(es) of the author(s)

The e-mail address, telephone and fax numbers of the corresponding author

Abstract

Please provide an abstract of 150 to 250 words. The abstract should not contain any undefined abbreviations or unspecified references.

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Please provide 4 to 6 keywords which can be used for indexing purposes.

Text Formatting

Manuscripts should be submitted in Word.

Use a normal, plain font (e.g., 10-point Times Roman) for text.

Use italics for emphasis.

Use the automatic page numbering function to number the pages.

Do not use field functions.

Use tab stops or other commands for indents, not the space bar.

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Use the equation editor or MathType for equations.

Save your file in docx format (Word 2007 or higher) or doc format (older Word versions).

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LaTeX macro package (zip, 182 kB)

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Please use no more than three levels of displayed headings.

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Abbreviations should be defined at first mention and used consistently thereafter.

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Always use footnotes instead of endnotes.

Acknowledgments

Acknowledgments of people, grants, funds, etc. should be placed in a separate section on the title page. The names of funding organizations should be written in full.

MANUSCRIPT FORMAT

All JACP manuscripts should be submitted to Editorial Manager in 12-point Times New Roman with standard 1-inch borders around the margins.

APA Style

Page length: 35 pages; Text must be double-spaced; APA Publication Manual standards must be followed.

Terminology

Please use the standard mathematical notation for formulae, symbols etc.:
Italic for single letters that denote mathematical constants, variables, and unknown quantities
Roman/upright for numerals, operators, and punctuation, and commonly defined functions or abbreviations, e.g., cos, det, e or exp, lim, log, max, min, sin, tan, d (for derivative)
Bold for vectors, tensors, and matrices.

Scientific style

Please always use internationally accepted signs and symbols for units (SI units).
Generic names of drugs and pesticides are preferred; if trade names are used, the generic name should be given at first mention.

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Citation

Cite references in the text by name and year in parentheses. Some examples:
Negotiation research spans many disciplines (Thompson 1990).
This result was later contradicted by Becker and Seligman (1996).
This effect has been widely studied (Abbott 1991; Barakat et al. 1995; Kelso and Smith 1998; Medvec et al. 1999).

Reference list

The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished

works should only be mentioned in the text. Do not use footnotes or endnotes as a substitute for a reference list.

Reference list entries should be alphabetized by the last names of the first author of each work.

Journal article

Harris, M., Karper, E., Stacks, G., Hoffman, D., DeNiro, R., Cruz, P., et al. (2001). Writing labs and the Hollywood connection. Journal of Film Writing, 44(3), 213–245.

Article by DOI

Slifka, M. K., & Whitton, J. L. (2000) Clinical implications of dysregulated cytokine production. Journal of Molecular Medicine, doi:10.1007/s001090000086

Book

Calfee, R. C., & Valencia, R. R. (1991). APA guide to preparing manuscripts for journal publication. Washington, DC: American Psychological Association.

Book chapter

O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), Gender issues across the life cycle (pp. 107–123). New York: Springer.

Online document

Abou-Allaban, Y., Dell, M. L., Greenberg, W., Lomax, J., Peteet, J., Torres, M., & Cowell, V. (2006). Religious/spiritual commitments and psychiatric practice. Resource document. American Psychiatric Association.

http://www.psych.org/edu/other_res/lib_archives/archives/200604.pdf. Accessed 25 June 2007.

Journal names and book titles should be italicized.

For authors using EndNote, Springer provides an output style that supports the formatting of in-text citations and reference list.

EndNote style (zip, 3 kB)

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All tables are to be numbered using Arabic numerals.

Tables should always be cited in text in consecutive numerical order.

For each table, please supply a table caption (title) explaining the components of the table.

Identify any previously published material by giving the original source in the form of a reference at the end of the table caption.

Footnotes to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data) and included beneath the table body.

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Executive Summary

Word Count: 958 words

Date: May 2016

Executive Summary

Every year, many children are exposed to potentially traumatic experiences. One-off traumatic experiences might include road traffic collisions, assaults, serious accidents or medical emergencies. Whilst most children will completely recover following such events, some children (around 16%) may develop symptoms of Post-Traumatic Stress Disorder (PTSD). Children may also have ongoing physical injuries or other emotional difficulties, such as anxiety or depression. Studies have shown that if the symptoms of PTSD are not recognised and treated some children will recover naturally. However, some children will continue to experience symptoms for years after. Research has tried to identify factors which may explain why some children recover and why some children experience ongoing symptoms.

PTSD is a psychological disorder that can develop following the witnessing or experiencing of an event that resulted in death or serious injury. People may develop a range of symptoms including re-experiencing of the event through nightmares or flashbacks; avoidance of reminders of the event; a loss of interest in previously enjoyed activities; hyperarousal, which can involve difficulties sleeping, irritability and hypervigilance; all of which can have a significant impact on day to day life. Children will develop strategies to manage their symptoms of PTSD and the sense of current threat that they experience. One of the most frequent strategies that children use is social support. Social support is the presence of, or the perceived availability of people we believe care about us and to whom we can turn to for support when needed. *Perceived* social support is about the perception of the number of people we have to turn to and how useful we find their support to be. *Actual* social support is the actual support we receive and the amount and type/quality of support that one individual provides to another.

Low *perceived* social support has consistently been linked to poorer psychological outcomes after trauma, such as PTSD. It is *perceived* social support that has been found to be more important in the severity of PTSD after a trauma but no one has investigated the impact of the *actual* support that people receive. It is unknown where children might seek their support, whether they perceive any barriers to seeking support and what factors (e.g. their age or their gender) might impact on the support they seek. It is also not known whether or not the support that children seek after a trauma has an impact on their psychological outcomes (e.g. PTSD). This study, aimed to address these issues.

Children who had attended one of four emergency departments in the South West, following a traumatic event (e.g. road traffic collision, assault, serious accident, medical emergency), were invited to take part in the study together with their parents. 104 children, aged 6-13 years, and their parents took part. Children and their parents completed questionnaires 4-weeks after they had attended the emergency department and again, 3-months later. The children completed questionnaires about symptoms of PTSD, their *perceived* social support, *actual* support they sought after a trauma and their perceived barriers to seeking support. Parents completed questionnaires about their children's symptoms of PTSD, their own symptoms of PTSD, their symptoms of anxiety, depression and stress and their views about their children's support needs post-trauma. 89 children completed the social support measures 4-weeks post-trauma and 70 children completed the measure of PTSD symptoms, 3-months post-trauma.

The children in this sample rated that they had good levels of *perceived* social support after their traumatic experience. Low perceived social support was more likely in boys and also in those who perceived more barriers to seeking support. Consistent with previous research, *perceived* social support was also a significant predictor of children's symptoms of PTSD, 4-weeks post-trauma, after controlling for their age. However, *perceived* social support did not predict children's change in PTSD symptoms over the first 3-months post-trauma.

The results of this study found that the majority of children in this sample (80%) said that they needed support following their traumatic experience. The most common people children will seek support from are their parents or friends. No child said that the support they received was unhelpful. The results did not identify any factors which might influence children's *actual* social support and *actual* social support was not associated with the severity of their symptoms of PTSD at either 4-weeks or change in PTSD over the first 3-months after their traumatic experience.

Implications for research

This study has identified that the majority of children feel they need support following a traumatic event. However, we don't know why they feel they need support, if they receive this, and whether this may have an influence on their psychological outcomes after a trauma.

As previous research has found, this study found that perceived social support is more important than actual use of support on psychological outcomes. But, it is still not known what children need to perceive about the support available to them for it to reduce the severity of PTSD post-trauma.

Previous research has identified indirect mechanisms (e.g. cognitive appraisals) that may influence the relationship between social support and PTSD. Research would benefit from investigating this further, specific to *actual* support.

Implications for clinical practice

This study highlights that a large proportion of children feel they need support after a trauma. It is important for those around children in such circumstances to be aware of this and to make sure they are available for the child if they need support.

A child's perceived support after a trauma is particularly important and thus improving a child's perceived support at that time is important. This study shows that boys and those with greater perceived barriers to seeking support are at the greatest risk for lower perceived support. Therefore, these groups should be identified for interventions to improve perceived social support.

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Connecting Narrative

Word Count: 1997 words

Date: May 2016

Main Research Project

I came to start my training, following a 3-year research assistant post where I had been involved in studying the early impact of traumatic experiences in young people, particularly looking at the development and early treatment of post-traumatic stress disorder. Following on from this work I wanted to find out more about the factors that were involved in natural recovery from trauma or the reasons symptoms may persist. Sarah Halligan had been involved in the development of my MSc dissertation project and I knew she was an excellent researcher and had a strong research interest in PTSD. When I approached Sarah about a research idea to look at the role of parents following a trauma it transpired that she was about to start a study looking at parental responses to children following single-event traumas. We discussed the different options of developing a project. Some of the concerns included recruiting sufficient participants to achieve power and trying to recruit participants from the same population (a population that from experience can be challenging and time intensive to recruit). Therefore, we decided to incorporate my study into the larger study by incorporating additional questionnaires. I was really interested in looking at the role parents and other people may play in the development or recovery of symptoms following trauma and this led to the development of my project looking at children's use of social support following a trauma and how this may influence the development of PTSD. At this point I met Rachel Hiller, the post-doctoral scientist and clinical psychologist who was running the study. I developed a questionnaire to explore the questions in this study, incorporating feedback from a number of experts in the field. I piloted the questionnaire on non-trauma exposed children to check the format of the questions. The reason to not pilot on children involved in trauma as it was unknown the impact the questions could have and ethics had not been approved. With Rachel's support for information about the study I completed a research amendment for IRAS and R&D to add my questionnaires into the study. The amendment was approved and my questionnaires were added into the study in October of the second year.

Due to the nature of the study it was not possible for me to be involved in all the assessments for all participants (the initial assessment was 2-3 hours per participant). We therefore discussed additional ways I could contribute. When study time allowed I would complete initial assessments with another member of the research team and time three assessments. I also helped to complete the time-two telephone assessments: completing the background interview, sending out questionnaires, qualitative interviews and follow-up calls. In addition to assessments I carried out other roles. I acted as a risk person for some of the assessments. I also created the SPSS data files and completed the scoring syntax for

the questionnaires and completed data input for a large number of the time one and time two questionnaire data.

Being part of the PROTECT study has enabled me to recruit a large sample size to improve the quality of my research, often difficult when completing research alongside the clinical aspects of doctoral training. It has also helped me build on my research experiences and gain more experience working on large research projects. However, it has highlighted the challenges of completing this alongside training. The experience has helped me to think about the challenges of completing research and doing clinical work alongside each other, particularly when working in different areas and different teams.

Literature Review

I saw the literature review as an opportunity to learn about an area I knew less about. During the research fair, Lorna Hogg, was talking about her interests in the area and briefly discussed the links between early traumatic experiences and psychosis. This immediately spiked my interest, thinking that the work I had spent so much time doing in childhood trauma, might link with the much unknown area to me of psychosis. With Lorna's guidance I started reading around the area and initially decided to conduct a review of the potential mechanisms in the link between trauma and psychosis. Unfortunately, as I started I discovered that the review had just been published with the search having been completed recently, including unpublished papers, providing little scope to update this. Therefore, I focussed on the outcomes and implications of this review to develop a new idea. It was clear that the literature was becoming saturated with evidence of the link between trauma and psychosis however, the clinical impact of this research on interventions was limited. This became the focus of the review, to look at the treatment of trauma and PTSD in people with psychosis. This review has been both extremely interesting and extremely challenging. I have found that in order to develop the review and do it justice I have needed time to get absorbed in the literature and forming the narrative. Unfortunately, time is limited so I found I was trying to complete sections of the review in shorter time periods. Despite this I have found the process of doing a literature review a valuable skill both clinically and academically. One of the instigators of this review is that the psychosis guidelines say to follow the PTSD guidelines if people with psychosis have a diagnosis of PTSD, yet the research does not back this up, highlighting the importance of such reviews clinically. It is also a useful skill to develop a good understanding of research methodology and critiquing your own work.

Service Improvement Project

During a lecture with Paul Salkovskis he introduced a project to look at the use of psychology reports in family court. I had not had any experience of this directly but had worked with some families going through the court following traumatic events. I was interested in finding out more about this. I approached Paul and started to develop the project, working closely with the service who provided support to those involved in family court and family solicitor firms. The project was approved by university ethics. The plan was to pilot the interview schedule prior to finalising for the services' ethics but the service would not agree to pilot prior to ethical approval from their ethics board. Despite the close collaboration in the development, the service rejected the project. This was incredibly disheartening, particularly as I had worked very closely with the organisation for over a year to make sure the project was addressing their needs. It really highlighted how difficult it is to do projects if you are not part of the service.

During this time I was on my first elective placement in a Looked after Children's team. The team was about 4-years old and there had been lots of development over that time, particularly in recent months, yet the documents and specifications had not been updated. This was creating confusion amongst the team and other professionals in the wider service, so a project was proposed to look at the pathways. I discussed this with my supervisor and the rest of the team who were keen to develop this. Over the next few weeks as I was developing the project ideas in preparation for ethics further developments were happening in the team which were presenting additional challenges. Although the project was still required, the course requirements to seek departmental ethical approval were placing unwanted time restrictions for the team and it felt there were possible conflicts and difficulties that may arise. Therefore, it was decided not to pursue this project at this time and to develop a new project with the team.

Part of my role on placement was to offer weekly consultations, with my supervisor, to social workers who needed input and support from mental health professionals around cases they were working with. Consultations are a large proportion of the clinical work provided by the team. Routine outcome measures are available for all clinical work in Child and Adolescent Mental Health Services but they do not fit the aims and procedures of consultations, thus they have never been evaluated. The feedback from social workers was consistently positive about how invaluable consultations were, and I could see anecdotally the value of the work, but there was no formal evidence of this. I therefore decided to take the opportunity to evaluate these consultations and see if there were

improvements to be made. I met with the three clinicians who provided the consultations and the services operational manager to discuss what they would like to find out about the consultations. I then received ethical approval from the university ethics committee and the trusts R&D. I consulted with the team to develop the survey. I then liaised with the CAMHS Operational Manager and the Fostering and Adoption Service Manager to check that the survey met their needs and to develop a recruitment strategy for recruiting social workers. There was significant time pressure with this study due to the failing of the previous two projects. This was uncomfortable at times as I was having to put pressure on individuals to enable the project to be submitted to ethics and R&D. It made me reflect on the potential constraints of the course as this was the kind of project that may have needed approval from the trust to be completed but not approval from an external ethical body (e.g. university). This project also showed me that when embedded in a service, projects can be developed and implemented within a short space of time, with support from the team.

Conducting the research presented me with new challenges. As social workers have significant time pressures I was keen for them not to feel burdened by the project, so the original strategy was to email the project information to all social workers in the county. However, in the initial time frame only four responses were received, despite several reminders. I liaised with the Fostering and Adoption Service Manager who agreed for me to contact all the team managers to visit team meetings. All the teams in the county meet on a Wednesday morning so it was not possible to attend them all. Some services did not respond to this request and some could not accommodate me in the time period. Therefore, I attended meetings where possible and contacted team managers to send paper copies. This significantly improved the response rate. Despite the social workers having very positive views about the consultations and ideas for improvements, anecdotally, it showed that researchers need to be proactive in conducting research.

This has been the most challenging project to complete across the course due to the various difficulties I have experienced. However, I have come to appreciate the value of service-specific research to develop evidence-based practice. I feel that as Clinical Psychologists we possess additional research skills, standing us apart from other professions, and thus we have a responsibility to encourage research and developing evidence based practice not only to evaluate you own work but also to feedback to commissioners to assure funding of services.

Future Aspirations

Research has been something I have been involved with on a large scale since my undergraduate degree. I thoroughly enjoy the process of completing research and adding to the field. However, starting the doctorate and working in clinical settings, I have learnt that it is important to get the balance between furthering knowledge within the research field but also completing research that is relevant and applicable in clinical settings. I will commit to continuing to conduct research throughout my career, trying to achieve this balance. I feel that I need to spend some time consolidating my clinical knowledge so I plan to develop service-based research but also seeking opportunities to support others in their research e.g. students. At some point in my career I would like to combine the two and complete clinical work as well as developing new research areas and ideas and applying for funding to complete research studies.

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